



University of
Chester

Attempting to create behaviour change using an
ethnographic approach: A family-based study

Jacob Edwards

Student No: 1017627

Assessment No: H08107

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‘Attempting to create behaviour change using an ethnographic approach: A family-based study’

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Abstract

Key words; Ethnographic, physical activity, exercise, behaviour change, transtheoretical model, retirement, family, intervention, motivation, barriers to exercise.

The following study is an ethnographic approach to changing behaviour towards physical activity with a recently retired family member by using a physical activity intervention.

The overall aim of this study was to attempt to create some sort of behaviour change using the Prochaska & DiClemente (1983) Transtheoretical Model (TTM) as a framework.

There is a wide range of previous research on the subject of interventions and how best to apply them and the differing environments (Stubbs & Lavin, 2002; Michie & Abraham, 2004; Ransdell, Taylor, Oakland, Schmidt, Moyer-Mileur & Schultz, 2003). There is a long process involved before commencing with an intervention, involving interviews, questionnaires, planning and evaluating.

Additionally, the study assessed my Father's psychological measures, as opposed to focusing on physiological measures.

The exercise undertaken each week was calculated using the Godin Leisure-Time Exercise Questionnaire (GLTEQ) calculation to assess whether there was an increase/decrease from baseline week to post-intervention. Despite the focus of the study analysing any change in behaviour, the use of the GLTEQ calculation enables for a greater understanding of how much exercise was being completed each week, in comparison to the baseline, my Father's weight was also recorded, prior to the intervention commencing, post-intervention and after the completion of the whole study.

The results found that there was a short term increase in physical activity from the baseline week compared to the weeks of independent activity. Furthermore, my father appeared to have extra positive feelings towards exercise before an activity after the intervention than beforehand.

Declaration

This work is original and has not been submitted previously for any academic purpose.
All secondary sources are acknowledged.

Signed: _____

Date: _____

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Chapter 1. Introduction

1.1 Research Aims & Objectives

Aim:

- To create behaviour change towards physical activity within a recently retired family member

Objectives:

- Understand my father's history in sport, exercise and physical activity
- Understand current barriers to physical activity and exercise by completing a questionnaire & interview
- Learn what activities my father would like to try
- Design a 2 week intervention that will tackle the barriers and incorporate my father's favoured activities
- Complete a 2 week physical activity intervention
- Serve as a fitness instructor/personal trainer throughout the intervention
- Provide feedback throughout the intervention

1.2 Basis of the study

The basis of this study is to implement a family intervention to create a behavioural change within a recently retired family member. There is a significant and varied amount of research investigating physical activity levels at retirement, the differing impacts of a variety of interventions (Stubbs & Lavin, 2002; Michie & Abraham, 2004; Ransdell, Taylor, Oakland, Schmidt, Moyer-Mileur & Schultz, 2003), the idea of using theory-based research as a framework (Bartholomew, 1998) and in addition the effect of using a family-based environment to increase levels of physical activity (Rodearmal et al. 2006; Holm, Wyatt, Murphy, Hill & Ogden, 2012). The aim of this study is to collate previous studies/research to formulate a highly successful intervention tailored for the needs of my father. While there appears a copious amount of research and studies highlighting the importance of family-based interventions using parents to help influence their children there appears to be a lacuna in the studies of family-based interventions whereby the child encourages the parent.

In this instance the child is a qualified fitness instructor, with knowledge and experience within an exercise environment. Given this scenario it would be an ideal opportunity to take advantage of the status of the child/parent to study the implementation of a

physical activity intervention formulated by the son to encourage behavioural change in my father.

1.3 Rationale for the study

Before the start of this study, a close family member, my father, retired from his full-time job which he had held for over 30 years. Previous research suggests that increasing physical activity levels is effective following retirement (Engberg, Alen, Kukkonen-Harjula, Peltonen, Tikkanen & Pekkarinen, 2012; Evenson, Rosamond, Cai, Diez-Roux & Brancati (2002); Lahti, Laaksonen, Lahelma & Rakhonen (2011). Furthermore, from an observational point of view as a family member I have witnessed my father attempt to become more physically active and eat healthier in order to lose weight in previous years. On more than one occasion I have seen him go through phases of varying his diet, joining several gyms, playing more sport, ultimately though he experienced a relapse until the next attempt at changing his behaviour, it has become a vicious circle. Therefore it seemed like a great opportunity to take advantage of his recent change in occupation and conduct a study that aimed to change his behaviour towards physical activity and increase his levels of activity.

However, to successfully implement an intervention and in turn change my father's behaviour it is imperative to identify previous research that has a similar approach and recognise potential strengths and weaknesses which can be adapted into this study. Additionally, understanding the different ways of collecting, presenting and analysing data in a variety of ways and choosing the most suitable approach for this study. Furthermore, it is essential to understand also that I will undertake a variety of roles throughout the study, some roles are served throughout the entirety of the study such as being my father's son and that the father/son relationship will be present throughout, but also the researcher role for this study will take place throughout the whole study. However other roles occur at differing times, for example, my role of fitness instructor will occur prior to and during the intervention, whereas my role of the ethnographic researcher will only apply during the two week intervention (the variety of roles will again be identified in the 'methodology' section).

1.4 Father/son relationship

The father/son relationship is a factor that is important not to ignore. Particularly because while observations from a researcher or fitness instructor perspective will be

important to the data collection process throughout the study, the observations made throughout my own life will affect the study and my own understanding of how I view my father's attitude. However this study could affect our own relationship, particularly if my father is unhappy with proceedings that take place, so it is important to express the series of events that will take place throughout the study and allow my father to understand exactly what will be asked of him, before he commits to participate in the study. Currently I am not a resident in the same household as my father, however during the intervention I will be able to reside with him as this is an important part of the methodology.

Chapter 2. Literature Review

2.1 Physical activity, exercise, sport and health

For the purpose of this study it is important to first differentiate between physical activity, exercise and sport and also define what is meant by 'health'. Physical activity can be defined as any bodily movement that is produced by the skeletal muscles, for example, walking to the shops (Caspersen, Powell & Christenson, 1985). However, exercise is described more as a planned, structured and repetitive bodily movement, with the objective of health enhancement or improving performance (Bouchard & Shephard, 1993, p.12). Despite this difference, the distinction between physical activity and exercise is not always easy to separate and therefore an overlap between the two should be recognised (Biddle & Mutrie, 2008, p.9). Sport however is a form of exercise whereby the activity is sanctioned with rules and offers a competitive aspect that may require physical strategy, prowess and chance (Rejeski & Brawly, 1988). A widely accepted definition of sport is from the Council of Europe (1992) stating "sport means all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels". Therefore it could be argued that if sports are physical activities, then chess is probably more of a cognitive sport than a physical sport (Coakley & Pike, 2009, p.5).

Health can be defined as less of an abstract state and more as means to an end which is expressed in functional terms as a resource which permits people to lead individually, socially and economically productive lives. Health is a resource for every day, not the object of living (World Health Organisation, 1986). Furthermore, many people believe that to be 'healthy' would involve the absence of sickness or disease (Jackson, Morrow, Hill & Dishman, 2004, p.7). Therefore, being 'healthy' could be linked to several factors including absence of disease, being mentally well, social inclusion and economically sound. Furthermore, regular physical activity is just one way of improving health, affecting diseases or social inclusion. What is important to understand is that being considered 'healthy' is not simply being free of a disease. That there are several factors that lead to being 'healthy'.

Physical inactivity can lead to such diseases as obesity, diabetes, cancer, hypertension and other non-communicable diseases (World Health Organisation, 2014). These diseases can lead to poor health. Therefore, if being physical activity can lead to an individual being healthy, it should be of paramount importance for individuals to

incorporate regular physical activity into their daily routines. However that would require knowledge on the barriers to exercise, which could prevent individuals from exercising regularly. Crossley (2012, p.241) states “while someone may be motivated [to be active] there may be factors that hinder their progress. If these barriers are too great the person is likely to fail. The more barriers we can overcome, the more likely the person will be to succeed”. Therefore, the presence of barriers could be linked to Robinson & Rogers (1994) statement that “adult physical activity levels in many industrialised nations’ remains well below recommended levels”. Similarly it is widely accepted that the physical activity levels in the United Kingdom (UK) are lower than the recommended levels for optimal health (Dugdill, Crone & Murphy, 2009, p.4) and that globally approximately 3.2 million deaths each year are attributed to a lack of physical activity (WHO, 2014). This could be a correlate of the increase in obesity levels, which have doubled since 1980 (WHO, 2014). Correlates are factors that can affect participation in exercise and physical activity (Biddle & Mutrie, 2008, p.11). According to Trost, Owen, Bauman, Sallis & Brown (2002) “Interventions are most effective when they alter the underlying variables that influence physical activity. Thus, studying “determinants” and correlates of, and barriers towards physical activity is an important prerequisite for designing relevant policies and effective programs”.

As previously established, physical activity is key in maintaining a healthy lifestyle for all individuals. Additionally, we have identified that physical inactivity levels are low in the UK, and a lack of physical activity can be linked to approximately 3.2 million deaths per year globally, so therefore it is important to understand the factors as why the population do not undertake regular physical activity, especially as the benefits contribute to a healthier lifestyle. There are many barriers that prevent individuals from partaking in regular physical activity, including lack of time, family responsibilities, work pressures, cost, travel, ignorance of the benefits, intimidation, negative past experiences etc. It is also important that fitness professionals identify their client’s barriers in order to understand ways to minimise these barriers (Dalglish & Dollery, 2001, p.11). Kay & Norman (2010, p.8) also believe that physical levels of ability are also heavily influenced by attitudes and personal belief systems. Factors like self-concept and perception of abilities affect what a person is able to accomplish. Dunlap & Barry (1999) agree further as they believe barriers to exercise, in particularly in older adults, include “personal factors such as discomfort, fear of injury, and social isolation, plus environmental difficulties such as lack of access and unfavourable weather”.

Therefore it seems that during any research involving physical activity interventions, it is of great importance to identify and overcome any potential barriers. One barrier mentioned is time, which may no longer be a barrier once an individual has retired from employment. Therefore there could be an emphasis on attempting to target recently retired people in increasing their participation in physical activity or exercise.

2.2 Retirement

Retired people may have extra time to commit to leisure activities such as walking and sports participation. However, just before retirement, older adults show the lowest level of physical activity (Chung, Domino, Stearns & Popkin, 2009).

Chung et al. (2009) investigated whether retirement changes individual's physical activity and also assessed whether the effect differs by occupation type and wealth. The study was conducted using the Health and Retirement study (1996-2002). Interestingly, Chung et al. (2009) found that retirement from a physically demanding job contributed to a decrease in physical activity, whereas retirement from a sedentary job was followed by an increase in physical activity. Furthermore, there was a negative impact on physical activity following retirement exacerbated by lack of wealth, whereas the positive effect of retirement on physical activity enhanced by wealth. The study fails to understand participant's reasons for physical activity/inactivity. The study identified that retiring from a physically demanding job contributed to a decrease in physical activity, however this could be a cause of injury on the workplace prior to retirement. There is a failure to identify psychological meanings behind participant's actions, whether this is to increase physical activity or decrease it. Perhaps a future study could look to identify why participants decrease physical activity in retirement and look to overcome those barriers.

According to a systematic review conducted in 2012, there is evidence to suggest that retirement is associated with increased levels of physical activity (Engberg et al., 2012). The study reviewed previous work around physical activity and the effects of participation based on life changing events. Therefore the review looked at studies involving diseases, family loss, marriage/divorce, change in employment status etc. Among the 34 studies reviewed, six were based on retirement and the effect of this life-changing event on participants' involvement in physical activity.

Evenson et al. (2002) found significant increases in physical activity, sport & exercise within both those that were physically active or sedentary at the baseline week both sets

of participants either maintained their participation levels or were more likely to adopt physical activity against those that continued to work. Using the Baecke questionnaire the study was conducted over a six year period and Evenson et al. (2002) suggest that the increase or maintaining of participation in retirement is due to several reasons including time flexibility, time availability, change to daily routines and awareness of long-term health. This study highlights the importance of understanding determinants of physical activity and plan effective interventions.

Another study conducted by Lahti, Laaksonen, Lahelma & Rakhonen (2011) was completed over a 7 year period and studied participants in the city of Helsinki, using questionnaires for the baseline data between the years 2000-2002 and then using a similarly questioned questionnaire for the follow-up data collection in 2007. The response rate was 83%, which is of participants that responded the first and final questionnaire. Results identified retirees significantly increased their participation in moderate intensity physical activity, whereas there were no changes in vigorous activity. However there is importance in encouraging recently retired people to increase leisure time physical activity as the increase in free time opens up new possibilities. The limitations of the study include a lack of understanding of behaviour change and why participants increased their leisure time physical activity. Lahti et al. (2011) identify the rationale for the increase in participation is largely due to extra free time, however there is a lack of detail in understanding the mind set of individuals. There is a failure to identify any potential barriers that could occur within a recently retiree, and there is an assumption that every retired person can start increasing physical activity. However as previously mentioned there are barriers to participation for all differing ages (Crossley, 2012). Another limitation is the fact that this is a self-reported study, so results may not be reliable or could in fact be false, depending on whether the participant has been truthful or whether they have forgotten salient information. It may be a possibility that any future study could look to identify the psychological reasons for the increase in activity compared to the physiological aspects.

From the research that has focussed on recently retired people, it would appear that there is a possibility in creating behaviour change towards increasing participation in physical activity/sport and exercise.

2.3 Transtheoretical Model

So far this literature review has identified various definitions in respect of physical activity, sport and exercise. Furthermore, identified barriers, correlates and the current state of health nationwide and globally, whilst also recognising the possibility of increasing physical activity once a person has retired. Therefore it would seem appropriate to identify a theoretical framework that can be used to target an increase in physical activity for recently retired people.

Transtheoretical Model (Biddle & Mutrie, 2008, p.119)

Please select the stage you feel you are currently in in relation to physical activity/sport or exercise

Precontemplation- I am currently not physically active and have no intention of doing so in the near future.

Contemplation- I am not currently active either, however have an intention to start in the near future.

Preparation- I am currently exercising some but not regularly, however plan to take action within the next month to exercise more.

Action- I am currently active, however have only recently started so am still at a high risk of relapse.

Maintenance- I am currently regularly physically active and have been for some time, at least six months.

The TTM was originally developed by Prochaska & DiClemente (1983) and ‘defines the processes of change as the cognitive, affective and behavioural strategies and techniques people use as they progress through the different stages of change over time’ according to Merchant, Griffin & Charnock (2007, p.110). The model can be implemented outside of physical activity measures, in fact Prochaska and DiClemente (1983) were observing smokers trying to quit without professional assistance and found that these self-changers passed through different stages as they attempted to change their health related behaviour (Buckworth, Dishman, O’Connor & Tomporowski, 2013, p.357). The use of the TTM is now popular and is frequently adapted to areas including physical activity behaviour change.

The success of the TTM as a useful behaviour change model has been a result of the model being implemented in interventions such as studies conducted by Cox et al.

(2003, cited in Biddle & Mutrie, 2008, p.125). Furthermore the success of the TTM in other health settings also adds confidence that this model could be further applied to a physical activity intervention.

Several studies have identified the transtheoretical model as a theoretical framework to identify, behaviourally, a specific stage an individual may belong to. The variety of studies include monitoring behaviour change to type 2 diabetics (Lin & Wang, 2012), applying the model to a sample of smokers (Fava, Velicer & Prochaska, 1995) and also in identifying consumer behaviour (Xiao, Newman, Prochaska, Leon & Bassett, 2004). However, studies within physical activity assess pre-contemplation, contemplation, preparation, action and maintenance stages.

Alternatively, a study by Armitage (2010) looked to review the literature surrounding the potential criticisms of the TTM. Despite some criticisms, Armitage (2010) found that the transtheoretical model was best applied to segment audiences as opposed to demographic variables. Furthermore, Armitage (2010) concluded that, if nothing else, the TTM is a valuable model which better aids our understanding of behaviour change in a health environment. By exploring the criticisms there is an opportunity to conclude the relevance of using the TTM in this study.

The TTM is an effective model to use for work with groups, communities or even individuals, principally because it looks to identify both the physical and psychological issues when developing an effective intervention. Furthermore the TTM can help in understanding ways to motivate adults in order to increase levels of physical activity, exercise or sport (Marcus & Forsyth, 2003, p.9).

2.4 Interventions

There are a variety of interventions ranging from home interventions, to community and work to school-based interventions that aim to increase participant's physical activity levels or involvement in exercise. Each type of intervention delivers different benefits and weaknesses (Ransdell, Dinger, Huberty & Miller, 2009). Therefore reviewing other studies and gaining the positives, negatives and identifying lacunae in previous work will help in creating a more effective intervention. For example, if a previous study has unsuccessfully implemented a family-based intervention, it would be a benefit to understand why the intervention failed.

When implementing an intervention, Bartholomew (1998) argues the use of a mapping intervention towards a health education intervention. A mapping intervention is constructed of five steps: Creating a matrix of proximal objectives, selecting theory-based intervention methods and practical strategies, designing and organising a programme, specifying adoption and implementation plans, generating program evaluation plans. In relation to the proposed study, this could be an opportunity for the researcher to follow these guidelines in order to create an effective intervention, as opposed to simply just creating a programme which may not be as effective.

A review conducted by Stubbs & Lavin (2002) looked at identifying the challenges that occur when implementing behaviour changes which lead to ongoing weight management. Stubbs & Lavin (2002) warn that interventions can either be too simple or too complicated which in the process can overload participants with a variety of complex techniques to change behaviour. Furthermore, the overall effectiveness of short term interventions and the impact it has on improving weight loss is disappointing. Important behavioural factors that are linked with weight management, which apply to physical activity include self-monitoring, motivation, goal setting, social support and starting to become more physically active. For weight loss and weight loss management it would appear that as well as psychological measures towards physical activity, a combination of behaviours towards energy balance and body composition relating to diet is required. Additionally, Stubbs & Lavin (2002) believe changes within individuals are not predictable and therefore at times are not measurable. Despite this many people experiment with different solutions and strategies that best fit participants' lifestyles and will have a greater effect. Therefore patterns of behaviour will often be inconsistent. The majority of individuals require guidance and support. Additionally, there is growing evidence to support the notion that programmes that combine different methods of behaviour change with key motivators for changing habits are effective in helping people develop healthier physical activity patterns. However, despite this review identifying behavioural factors towards weight management and identifying the importance of physical activity in creating behaviour change, there is a failure to mention theories of behaviour.

There is an increasing recognition that interventions that focus on behaviour change should coincide with theories of behaviour and behaviour change in their development (Michie, Johnston, Francis, Hardeman & Eccles, 2008). Furthermore, there are three main reasons for this idea. Firstly, interventions may achieve greater success if they

target determinants of behaviour and of behaviour change. Secondly, a theory based intervention can facilitate better knowledge of why certain interventions are more successful and therefore apply better interventions. Thirdly, theory can be advanced only if interventions and evaluations are theoretically informed (Michie et al. 2008).

Additionally, a study by Michie & Abraham (2004) evaluated the assessment of the success of a behaviour change intervention, which can be done by answering three questions. Firstly, does the intervention work? Meaning was there a measurable improvement in behaviour towards a health care practice? Secondly, how well does it work? So can the intervention be applied to other settings such as a larger/smaller population? If so, how could it be adapted? Finally, how does it work? Which procedures and techniques were paramount to creating behaviour change? These questions can all be answered not just from data, but understanding the participant's feelings towards the intervention by asking what did and didn't work. Furthermore, Michie & Abraham (2004) continue by stating, 'there is a need for experimental studies of techniques, forms of delivery and target populations to identify the combinations that are critical to intervention effectiveness'. These questions posed by Michie & Abraham (2004) show a valid way of judging whether the intervention was successful and achieved its desired objective. Additionally the questions could be used if interviewing participants to gain a perspective from the participants as well as the researcher, which could further help any adaptations required on an intervention.

To develop an effective intervention, it is important to understand factors that may predict successful participation and also identify possible barriers which could be the motivation for physical inactivity. There are many and varied barriers (Ransdell et al, 2009). Once the practitioner or trainer has identified any potential barriers which are likely to hinder the participants, they are able to develop a strategy to address them (Ransdell et al, 2009). In the UK, the National Health Service suggests that a home or community strategy tends to be more effective intervention than a facility based one (Biddle & Mutrie, 2008, p.308), whereas Ransdell et al. (2008) find both positive and negative aspects to either a group or home based intervention.

A study conducted by Michie, Abraham, Whittington, McAteer & Gupta (2008) aimed to assess the effectiveness of behaviour change interventions designed to promote physical activity and healthy eating. Michie et al. (2008) found that 51 evaluations targeted physical activity only and that the majority of those used more than one behaviour change technique. Of these interventions, 84% were multiple sessions to

deliver an intervention. The studies involving self-monitoring and either prompt goal setting, provide feedback on performance or other techniques derived from Carver and Scheiers (1982) control theory were significantly more effective interventions than studies that did not use these techniques. So therefore Michie et al. (2008) support the notion of including self-monitoring of behaviour as well as prompting intention formation, prompting specific goal setting, providing feedback on performance and prompting review of behavioural goals in interventions designed to promote physical activity. Offering feedback could contribute to greater levels of self-efficacy. Bandura (1997) defined self-efficacy as the beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" cited in Tenenbaum, Eklund & Kamata (2012, p.251). There is evidence to suggest that attempting to target self-efficacy is an effective way to increase levels of physical activity (Williams & French, 2011).

Schneider, Mercer, Herning, Smith & Prysak (2004) completed a study attempting to use cognitive based training interventions to increase physical activity within older adults. Schneider et al. (2004) used the Godin Leisure-Time Exercise Questionnaire (GLTEQ) to total a score of how much physical activity was undertaken in a 7-day period. This particular study observed that Cognitive Behavioural Therapy (CBT) interventions only mildly effect exercise behaviour, however negative cognitions related to exercise can result in discontinuation of exercise. Schneider et al. (2004) identify CBT 'is based on the view that thoughts or cognitions mediate behaviour'. Schneider et al. (2004) also found that changes in cognitions or interpretations, resulted in changes in exercise behaviour and subsequently improved physical outcomes. Therefore there is relevance in using CBT techniques when applying a physical activity intervention, as specific feelings during exercise can be interpreted from a feeling of tiredness and sweating, to understanding and interpreting the benefits of the exercise. The GLTEQ is a way of calculating the amount of exercise undertaken by an individual each week. GLTEQ includes frequencies of strenuous, moderate and light activities, and with this, each frequency has a respected number. For example strenuous (9), moderate (5) and light (3). When calculating a GLTEQ score for the week the calculation requires how many times an individual completed an activity of that frequency, multiplied by the respected number, then adding each frequency total together for an overall GLTEQ score (Ransdell et al. 2009, p.27). For example, if an individual completed 3 strenuous

activities, 5 moderate activities and 7 light activities, the calculation would be as follows:

$$(9 \times 3) + (5 \times 5) + (3 \times 7) = 73$$

Therefore the GLTEQ score would 73.

Although the use of the GLTEQ will fail to identify any psychological feelings towards exercise, it is an effective way to monitor an increase or decrease in physical activity. Researchers could then look to identify the reasons for the change using interviews.

O'Connor, Jago & Baranowski (2009) reviewed physical activity interventions involving parents acting as role models and subsequently being directly involved with the children's everyday life. In the proposed study the approach is the converse whereby it is the child who is actually serving as a role model attempting to influence behavioural change within a parent. However there are still methods and literature which are relevant and will provide assistance within this family-based intervention. Having undertaken a review of 35 studies, they can be subdivided into groups based upon their respective outcomes. For the benefit and in preparation for this proposed study it would be appropriate to review the studies that conclude there had been 'increasing physical activity' as these would be the most relevant for the study with the overall aim of creating behaviour change, and an attempt at increasing physical activity participation. From this, we then scale down to the studies that involved parents being involved in the exercises with the children. This narrows the systematic review to six relevant studies. Of those six studies only one study had a positive effect on children's physical activity. The conclusion of the study was that there was not an optimum way to involve participants in an attempt to increase physical activity.

However the one study that showed positive effects was conducted by Ransdell, Taylor, Oakland, Schmidt, Moyer-Mileur & Shultz (2003). This study focussed on mothers and daughters exercising together, either in community based sessions led by a fitness instructor, or home based exercises completed in either the home or nearby. The rationale for this was that Ransdell et al. (2003) believed that previous family-based interventions had attempted to do too much, often using the entire family and trying to change both dietary and physical activity habits. Ransdell et al. (2003) believe that "limiting behaviour change expectations to physical activity, rather than targeting physical activity and nutrition, is the key to experiencing more success with family-based interventions". Before the intervention, focus groups were set up and mothers and

daughters were able to express particular activities and exercises they would like to try, these suggestions were then used in the study. Home-based participants were sent exercises and stretches to complete and therefore were not in contact with an instructor to the same degree as the community-based participants. The study overall showed that mothers and daughters that completed the 12 week programme showed improvement in muscular endurance, flexibility, muscular strength and aerobic capacity. Despite these improvements the study is based on success by identifying improvements based on the physical improvements, physiological, as opposed to psychological implications. Despite this the study still offers evidence that parental involvement can have an effect on a child's level of activity. So therefore it is not possible to understand if participant's behaviour towards exercise changed.

A study by Rodearmal et al. (2006) found that a family-based intervention over a short period of time (13 weeks) based on small lifestyle changes has the potential to prevent obesity, which can be caused from physical activity. Rodearmal et al. (2006) used a pedometer to try and increase walking within the family as well as planning a nutrition diet of two bowls of cereal per day. With the success of this study suggesting small lifestyle changes can be achieved within a family environment, there is relevance to achieve behaviour change with an intervention over a short period of time, provided it is small lifestyle changes. However the limitation of this study is that it is only used within a family environment and therefore further research could look to identify the relevance of this study within individuals. Also, the study looks at physical activity and diet, perhaps there could be greater emphasis on improving either physical activity or diet first, which could see greater results, then look to improve both, this is similar to the argument Ransdell et al. (2003) stated that limiting behaviour change to just one aim may achieve more success.

Furthermore, a study by Holm, Wyatt, Murphy, Hill & Ogden (2012) looked to assess parental influence on children in regards to physical activity and child weight gain prevention. Holm et al. (2012) identified that family-based behavioural interventions were an effective approach for treating overweight or obese family members. The study aimed at increasing steps taken per day among parents and children against their baseline, attempting to take an additional 2000 steps each day for the remainder of the intervention. For the study each family were given electronic pedometers. The study strongly predicted that when a parent met their goal, their child would take on average an extra 1000 steps. Overall, the study concluded that encouraging parents to increase

their physical activity during interventions would help increase children's physical activity also. Therefore there appears to be evidence that suggests family-based interventions can help influence an increase in physical activity.

The criticisms of the literature reviewed outline the fact that participants of the study took part in a study that was already designed prior to their involvement. Perhaps other studies looked at identifying exercises that participants enjoyed there would be a greater change in behaviour. Just as Ransdell et al. (2009) identified, "the importance of understanding barriers, similarly it would therefore identify exercises participants enjoy and implement them in an intervention".

Perhaps then when assessing the most relevant method for the current study, it is also important to identify ways in which this study could be most effective. Taking the criticisms of previous studies and using that knowledge to ensure similar criticisms do not occur.

The following section will identify how the research will be conducted and what the most appropriate method would be to apply.

Chapter 3. Methodology

3.1 Ontological Position

Having reviewed the relevant literature, and identified the different methodology applied in those studies, it will now be beneficial to understand the philosophies of how the world around us is viewed by the researcher. The way the world is viewed by individuals would be described as ontology, which can be split into two schools of thought; objectivism and constructivism (Smith, 2010, p.7). In sport research, those who study biomechanics, physiology, nutrition and psychology and consider that social phenomena exist independent of social influence are known as ‘objectivists’ (Atkinson, 2012, p.149; Smith, 2010, p.7). Whereas constructivists believe in the social construction of reality and the world around us (Atkinson, 2012, p.149). Furthermore, constructivists believe that how we as individuals understand and interpret occurrences in the world is shaped by determining categories of our mind (Sparkes & Smith, 2014, p.11). The proposed study intends to observe my father throughout a physical activity intervention to gain an understanding of his behaviours and how the world around him affects and contributes to those behaviours. Therefore, as the researcher in this study, I would be viewing the research from a ‘constructivist’ perspective as in this instance there is no ‘black and white’ answer. Therefore, this study will be written in the first person, as I will be potentially playing different roles throughout the study, which will have an impact upon my father. Now that the ontological philosophy has been established, the epistemological view can be identified.

3.2 Epistemological Position

Epistemology is the philosophy that studies how knowledge is produced (Atkinson, 2012, p.61). Smith (2010, p.8) splits the epistemological view into two branches; ‘positivism’ and ‘interpretivism’. A positivist will approach a study with the belief that science is measurable through facts, numbers and statistics whereas an interpretivist may believe that human thought and behaviour is shaped by the reality around them and can differ through time (Atkinson, 2012, p.117 & p.159). For example, when studying the ageing process, objectivist research may identify that more people aged 50-55 play football than those aged 80-85, despite the factual information an objectivist approach towards this data will fail to identify the rationale to explain this. Whereas subjectivist (interpretivist) epistemology will gather data about an individual’s personal experience, as each individual has a different experience of ‘ageing’ (Smith & Waddington, 2014, p.132-133). From these definitions and the example provided, the proposed study

would be best viewed from an interpretivist point of view. The rationale for this is related back to aims and objectives of the study which included attempting to understand my father's behavioural patterns and how these affect his current attitude towards physical activity. Furthermore, I will undertake a review of how my father plans his own personal timetable incorporating physical activity and attempting to adjust this to allow greater opportunity for activity. As mentioned by Smith & Waddington (2014), there is no *one* process that individuals experience. Therefore this study requires an understanding of my father's history of participation in an exercise environment and also his attitude and feelings towards exercise. In my view the positivist approach of analysing both numbers and data would not be valid for this particular study.

3.3 Research Paradigm

Now that the epistemological perspective has been identified, it will now become easier to recognise the most appropriate research paradigm for this study. There are two methodological approaches; 'qualitative' and 'quantitative' (Smith, 2010, p.9; Gratton & Jones, 2010, p.33). According to Gratton & Jones (2010, p.33) if the researcher is interested in measurement of a particular phenomenon then the preferred approach would be quantitative, whereas if the premise of the research is based on participants feelings and thoughts then a qualitative approach would be more appropriate.

Occasionally a mixed-method approach is required due to the nature of the study which amalgamates different research approaches (Smith, 2010, p.187). 'For the researcher interested in developing a greater understanding of sporting behaviour and its meaning, combining 'quantitative' and 'qualitative' research has potential and may allow for a greater knowledge and understanding (Smith 2010, p.187). As the researcher, I anticipate I will be involved in my father's day to day lifestyle, in excess of the usual father/son relationship we currently enjoy. As well as implementing an intervention, it will be necessary to undertake observation and this is another aspect of the study to consider. Therefore an ethnographic approach would be most beneficial for this study, as it allows for the researcher to interview and observe the participant to allow for the interpretation of the findings made.

3.4 Ethnography

Ethnography is a way of conducting research to gain a greater understanding of the social world, and why individuals behave in certain ways (Smith, 2010, p. 169). Smith

(2010, p.169) continues by stating that, ‘ethnography extends and enhances our understanding as a way towards examining sporting cultures and the people that form these’. The aim of ethnography is to try and understand the behaviour of a group or individual by attempting to view matters through their perspective, which would ultimately involve the researcher becoming part of the group under investigation (Gratton & Jones, 2010, p. 109). This research approach is beneficial for the study I intend to undertake as it allows myself, as a researcher, to understand the day to day occurrences that impact upon my father’s behaviour towards physical activity.

The rationale for an ethnographical approach in this study is centred on gaining an insight into the behaviours of the individual participating in the study, my father. With the benefit of that knowledge, I will be able to develop a physical activity intervention which will aim to change his behaviour towards physical activity and exercise. As the study will be conducted ethnographically, I will have regular direct contact to my father regularly before, during and after the intervention.

One of the central important aspects of this study, is the actual implementation of the intervention. Gratton & Jones, (2010, p.199) argue that, ‘the researchers own characteristics are an important consideration’. For example, to implement and act as a fitness instructor, the researcher should be appropriately qualified in order for them to develop an appropriate intervention. On the other hand, if the researcher has little knowledge of the characteristics and knowledge of a fitness instructor, the credibility of the intervention itself would come under scrutiny. However I am currently working as a qualified fitness instructor in a local gym, therefore there are minimal ethical concerns in relation to this, and the integrity of the study.

Before the commencement of the study I will need to obtain consent from my father to take, and there will be a need to fully explain the procedures to be adopted. This should be an easy step as my father has a strong motivation to want to change his behaviour and increase his participation in physical activity.

3.5 Conducting the Study

As stated in the research aims and objectives, prior to the intervention, I will need to collate information from my father about his history of physical activity and/or exercise. This will be conducted using a mixed-method approach involving questionnaire and interviews. ‘A questionnaire is a type of survey where respondents write answers to questions posed by the researcher on a question form’ according to Lynch (2010, p.72).

The questionnaire will be based on my father's current barriers to participation. In order to assess these I will utilise an 'older adult barriers to exercise questionnaire' adapted from Ransdell, Dinger, Huberty & Miller (2009). The basis of this questionnaire is the participant is able to highlight which barriers are most influencing on their behaviour towards exercise, and in addition it provides an opportunity for participants to suggest three ways they would like to try and tackle these barriers. Using this questionnaire permits my father to choose exercises or techniques with which he will feel comfortable as opposed to setting out an intervention without any input. In addition to the questionnaire, my father will also be asked to identify at which stage on the transtheoretical model he would place himself before embarking on the intervention. This will be an important stage as it gives a baseline to allow for analysis following the conclusion of the study to identify whether there has been a fundamental change in behaviour.

After my father completes the questionnaire, I will then undertake an interview with my father to allow me to gain a greater understanding of what he considers to be his main barriers to undertaking regular physical activity, and to compile a history of his physical activity and exercise. 'An interview is much like a conversation except there is a specific purpose to it, it has the purpose of obtaining information relevant to a particular research topic' according to Lynch (2010, p.173). This mixed-method approach will provide me with an understanding of how my father has historically tried to change behaviour and why he believes he did not succeed in his aim of changing those behaviour patterns. Furthermore this also allows for an opportunity for my father to have some input on what exercises he would like to undertake. It is argued by Smith (2010, p.185) that 'sometimes a single method of research may limit the researcher's ability to identify key findings within a study, therefore by using multiple approaches there is a greater chance of understanding key information from the target group'. Therefore, I will adopt a mixed-method approach for this study.

When conducting any interviews or questionnaires, reliability is an important factor. 'Reliability generally refers to the consistency of the results obtained' (Gratton & Jones, 2010, p.93). However there are specific threats that can impact and even hinder the research project, again, it is important to identify the risks prior to the commencement of the study in order to address any reliability issues.

Subject error occurs when a participant responds differently to a question based on when the question was asked, before, during or after performance. In this study it is

likely that questions feelings & attitudes towards will be posed at the time of participation (Gratton & Jones, 2010). For example, when asking my Father about how he is feeling before the exercise, the question will be posed prior to the exercise, therefore it is simply him stating how he is currently feeling. Whereas if I asked the same question after the exercise is completed he may be experiencing very different feelings and have to remember a state of mind retrospectively. So therefore it is important to plan the appropriate time to pose questions throughout the intervention in order to gain the most reliable response. Additionally, a quote from Sands (2002) suggests that as an ethnographic researcher you must be prepared to be flexible and record data at any moment as the opportunity presents itself, therefore always carry a notebook around to make notes of data (Gratton & Jones, 2010, p. 204). From the researcher perspective, researcher error could occur if there is more than one researcher involved with the data collection process, however, in this case during this study there is only one researcher there is no threat of this occurring (Gratton & Jones, 2010). Subject bias is potentially threatening to any study. In this scenario this would involve my father, the subject of this study, giving answers to a question based upon what he anticipates I wish to hear. Prior to any interviews or questionnaires I will inform my father that there are no 'correct' answers and that he should answer truthfully as this will help create a more effective study. For example, if he tells me he could complete an exercise, which is clearly beyond his ability, then he may struggle to complete that exercise and this may have an undermining impact on the success of this study.

3.6 The intervention

There are a number of negatives in respect of home-based interventions as identified by Ransdell et al. (2008). These can be eliminated in the following ways; exercises done incorrectly will not become an issue as the researcher will be present to offer advice during the intervention. My father's motivation may be limited during the intervention, yet as a qualified fitness instructor with the necessary experience of this job role and experience of motivating individuals this would eradicate the issue. Finally, safety concerns will not become an issue as a risk assessment of the area being used will be undertaken prior to the exercise. In addition, home-based programmes have better adherence rates whereas other programmes fail to reach the individuals requirements (Robinson & Rogers, 1994). Furthermore, many people cannot afford to join a gym, therefore these individuals will require an alternative method to be active. There are many differing types of interventions that can be delivered without using a gym or

being costly (Marcus & Forsyth, 2008, p.7). Therefore, when designing an intervention I will attempt to do so without the use of activities that require financial input from my father.

Some studies in the literature review looked at physiological factors (Ransdell et al. 2003; Holm et al. 2012) whereas others focussed on psychological factors (Michie et al. 2008; Schneider et al. 2004). Despite this there are still relevant rationales used that can help towards the planning of this proposed study. For example, Ransdell et al. (2003) suggest focussing on either physical activity or diet, not both. Therefore I will focus solely on physical activity. Also, Schneider et al (2004) used the GLTEQ to record the physical activity being undertaken, as previously mentioned despite this not offering an insight into psychological measures, the GLTEQ score would still offer a way of analysing differences between exercises completed in the baseline week compared to the post-intervention phase. For example, behaviour change can be created and the GLTEQ will be able to offer additional information based on the amount of physical activity undertaken.





Once the intervention commences I will be adopting the role of an ethnographic researcher and also a fitness instructor. Therefore I will be involved in my father's life for longer periods than usual. Throughout the intervention my father will keep a daily diary setting out his feelings towards exercise and how he felt on each day, before, during and after exercise. However, as role of the researcher also I feel it would be beneficial to complete a diary of observation. It will be interesting to review that diary during the intervention to observe whether there is a need to motivate my father more on specific days, and whether a pattern develops. All this will be vital for the purposes of the data analysis at the conclusion of my research.

An important aspect to consider when the intervention commences is 'reflexivity', which allows myself, as the researcher, to reflect upon my own roles throughout the intervention, perhaps critically evaluating my contribution and considering whether there has been any input from me which may have had an adverse effect on my father. Gratton & Jones (2010, p.248) state that reflexivity 'allows the researcher to critically reflect on their own role within the whole of the data collection process, and demonstrate an awareness of this and how it may have influenced findings, to the reader'. As I will be undertaking different roles throughout the intervention it will be important to consider how I will be influencing the events throughout the intervention and the impact of this upon my father.

Once the intervention is complete, I will conduct a second interview, focussing primarily upon the diaries kept throughout the intervention period. This will allow a greater understanding on my father's feelings and attitudes throughout the intervention and identify any negative issues that may have occurred.

From this point in the study, my role in the ethnographic sense will finish. However the relationship of father/son will return to the pre-study status quo. This is in contrast to the relationship throughout the intervention when an exercise regime was undertaken, having been pre-determined by myself. In the four week period post intervention there are no plans for further exercise with my father, unless he has planned it himself and asked for my participation. This is to analyse if the intervention succeeded in changing his behaviour. At this stage of the study there will be a need for things to be as 'normal', and as close to the baseline week as possible. Below is a timeline figure (1) of the variety of roles that I will undertake throughout the study and at what phases these roles will commence and conclude.

Table 1: Timeline of different roles I will undertake throughout this study

	Pre- Intervention Phase	Intervention Phase	Independent Activity Phase
Son			
Researcher			
Ethnographic Researcher			
Fitness Instructor			

The difference between the role of 'researcher' and 'ethnographic researcher' is that as an ethnographic researcher I will be living with my father throughout the intervention to understand his day-to-day living patterns and also act as his personal trainer, whereas simply as a 'researcher', there is no necessity to reside in the same environment, the 'researcher' role is more about the whole study in general.

3.7 Ethical Considerations

There are several ethical considerations to comprehend before the study commences, including both physical and psychological impacts that could affect my father. One potential issue could arise from the interview process. This could occur through my father identifying subjects throughout his life that could cause upset. Therefore, prior to the study and the interviews it will be explained that at any time if my father would prefer to skip a question, or suspend the interview this request will be granted instantly. Furthermore, a physical and psychological impact could occur during the intervention either from an injury during an exercise or my father may struggle to complete an activity that could upset him, to ensure this does not occur the intervention will be discussed with my father prior to the start, therefore allowing him to have any input on potential activities he would rather/rather not complete, additionally during the first interview one question will involve my father stating his favoured activities which will help in the design of the intervention. So therefore my father will not be completing any exercise that he does not agree with beforehand.

3.8 Explaining/analysing the data

The following section collates the results from the study, including ‘pre-intervention data’, ‘intervention phase data’ and the ‘independent activity data’. However, the process by which these will be analysed is quite an in depth and complex one. The general analysing is to observe if my father increases the amount of physical activity that he undertakes against his baseline, which will be done using the GLTEQ score, similarly included in the Schneider et al. (2004) study previously mentioned. The graphs and charts of his feelings during exercise will contribute to an understanding and possibly an explanation of the results of the study.

Each of the three sections identified above will include charts, graphs, tables and additional information gathered throughout the study. Firstly, each section will contain a table of information including my father’s weight, TTM phase stage and GLTEQ score for that phase of the study. In the first section, the pre-intervention data section, there will be a table of responses that my father gave in his pre-intervention interview, including his thoughts towards exercise, barriers, history of exercise and any key moments that have influenced his activity levels. The following piece of data will be a chart of his positive and negative feelings towards his state of mind when exercising. This will be followed up with a table of the feelings he mentioned to reference the chart.

The final part of the pre-intervention phase data will include my observations of my father's historical exercise levels as observed whilst growing up within the family household.

The second section is the 'intervention phase' data. This section will include the same information as the previous section, however the interview transcripts will not be included.

The final part is the 'independent activity data'. Included will be a 'final feelings' chart formulated from information taken from my father's diary kept throughout the independent activity part, followed by the feelings he recorded. The subsequent observational chart will be completed based upon my observations from the reality of being his son. Finally, a final interview will be completed at the conclusion of the study. The information gathered from this interview will be presented in another table highlighting the key responses given, as done with the responses to the first interview at the start of the 'pre-intervention' section.

With such a wide range of in-depth data, and to conclude the results section, it will be necessary to produce a simplified version of my father's change of weight, TTM phase, GLTEQ score and his feelings towards exercise to. Following on from this a discussion will be formed.

Chapter 4. Results

The following data is a mixture of qualitative and quantitative data collected from the start of the study until the end. As mentioned in the previous chapter, the data is interpreted into a combination of in-depth charts and tables which then form into a comparison arrangement for an easier observation at the end. Below each chart is a table of words/quotes or observations that have dictated the formation of the graph. Also included in each section is the weight, TTM phase and GLTEQ score.

The three stages tell a story from the start of the study before an intervention was planned, through to the end of the study. At the end of this section, there is a simplified version of the data, mainly a comparison of data in differing stages which will then lead onto the discussion.

4.1 Pre-Intervention Phase Data

Weight	16st 9lbs
TTM Phase	Contemplation
GLTEQ Score	15

As previously stated in the method, there were three key sections to this study, the first section is headlined ‘pre-intervention’ whereby the data was collected as a baseline, a representation of normal life for my Father, however the pre-intervention data involved an interview to understand what has contributed to his current levels of activity. This interview will be beneficial when creating an intervention based on his past experiences.

Table 2- Interview 1 responses

<p>Key moments/influences throughout your life that relate to your involvement in physical activity</p> <p>Quotes in blue represent a positive impact on activity</p> <p>Quotes in red represent a negative impact on activity</p>	<p>Worked in a sport centre</p> <p>Qualified swimming lifeguard</p> <p>Entered swimming competitions</p> <p>No family commitments originally</p> <p>Changing jobs reduced activity</p> <p>Shift work presented a big barrier</p> <p>Lots of driving with job</p> <p>Got married</p> <p>Family commitments</p> <p>Brother-in-law started playing squash as well</p> <p>Injury (Achilles tendon)</p> <p>Squash partner suffered injuries</p> <p>Gym environment</p> <p>Wife enjoys walking as well</p> <p>Nice weather</p>
<p>Activities undertaken throughout your life</p>	<p>Swimming</p> <p>Squash</p> <p>Racquetball</p> <p>Cross trainer</p> <p>Cycling</p> <p>Walking</p> <p>Treadmill</p>
<p>Current thoughts towards current thoughts towards exercise</p> <p>Quotes in blue represent a positive impact on activity</p> <p>Quotes in red represent a negative impact on activity</p>	<p>Do not enjoy gym environments</p> <p>However using home gym equipment</p> <p>Do not enjoy team sports</p> <p>Enjoy individual sports</p> <p>Do not enjoy weights</p> <p>Do enjoy cardiovascular</p> <p>Feels it's important to good health</p> <p>It's more of a luxury</p> <p>Other things take priority</p>
<p>Previous attempts at changing behaviour</p> <p>Quotes in blue represent a positive improvement on activity</p> <p>Quotes in red represent a negative impact on activity levels</p>	<p>Joined gyms</p> <p>Self-motivation</p> <p>Bought gym equipment</p> <p>**Mentioned success was only short term**</p>

Current barriers to exercising	Work commitments (Starting up a business) House renovations Bad weather Family demands
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The chart below presents my Father's feelings towards exercise prior to the intervention. This also includes his feelings during the baseline week which he recorded when he completed exercise. The chart clearly identifies the positive and negatives that occur in his mind-set before, during and after exercise.

Table 3- Feelings towards exercise before intervention

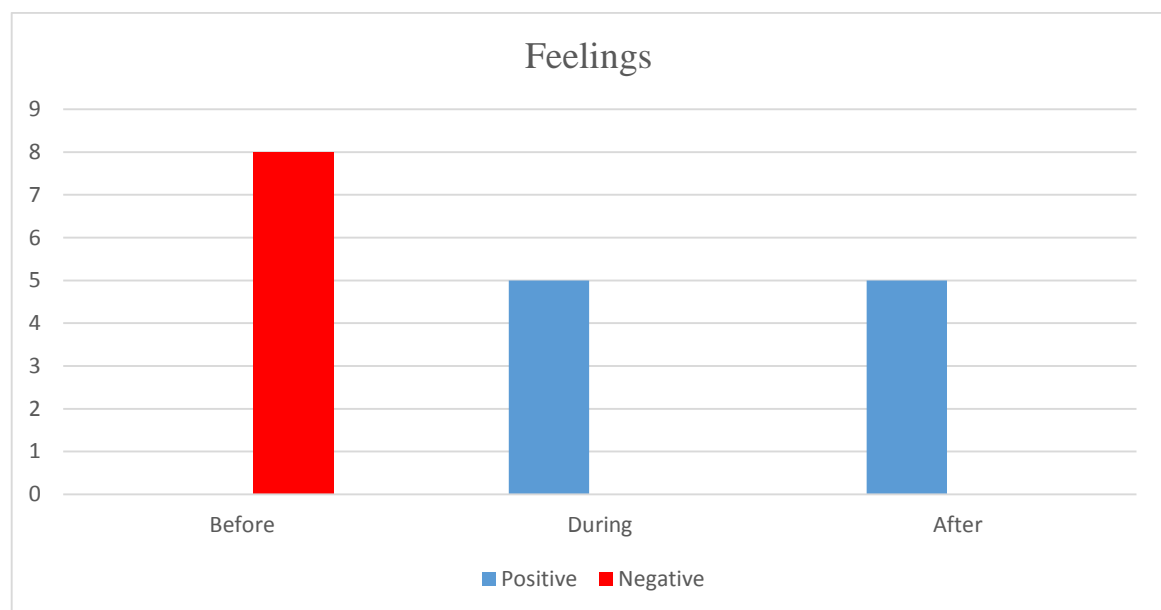


Table 4- Feelings towards exercise before intervention

Feelings Before		Feelings During	
<u>Positive</u>	<u>Negative</u>	<u>Positive</u>	<u>Negative</u>
	Can't be bothered Don't want to do it Done other things Not pre-planned Feeling tired Feeling drained Not looking forward End of the day	Don't mind it Enjoy it Music/TV helps Nice to go out	
Feelings After			
<u>Positive</u>		<u>Negative</u>	
Feel quite good Feel positive Gives you a boost Glad to have done it Helps eating healthily			

Observations (Son) - These are the observations I have made throughout my life of my father and his attitude towards physical activity and exercise

Table 5- Observations prior to intervention

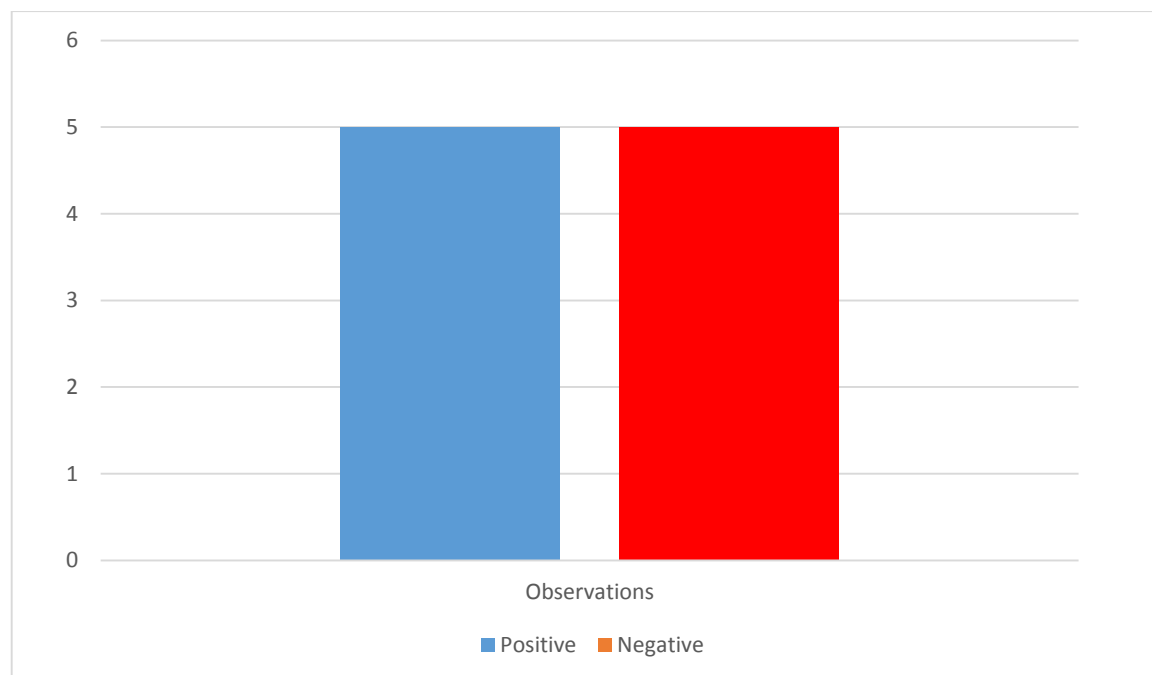


Table 6- Observations prior to intervention

Observations (Son)	
<u>Positive</u>	<u>Negative</u>
Played racquetball a lot at stages Tries to walk a lot, especially on holiday Extra effort to exercise before a holiday Aware of the benefits exercise can have Joined several gyms	High relapse Seems concerned with his weight a lot No exercise at times Focuses too much on diet not exercise Too much time watching TV

4.2 Intervention Phase Data

Weight	16st 5lbs
TTM Phase	Action
GLTEQ Score	42 & 36

Displayed below is the exercises that were undertaken throughout the intervention, in total there were four different activities; gym, racquetball, walk to relatives and walk to Cheshire Oaks. The chart is created using the positive or negative things mentioned by my Father either before, during or after exercise. For example, for the gym session he mentioned five positive feelings, therefore the bar is set to 'five'. Some exercises were completed more than once so will have considerable higher figures. Below the chart is a table of the feelings mentioned by my Father. Some were mentioned one more than one occasion.

Table 7- Feelings towards exercise during intervention

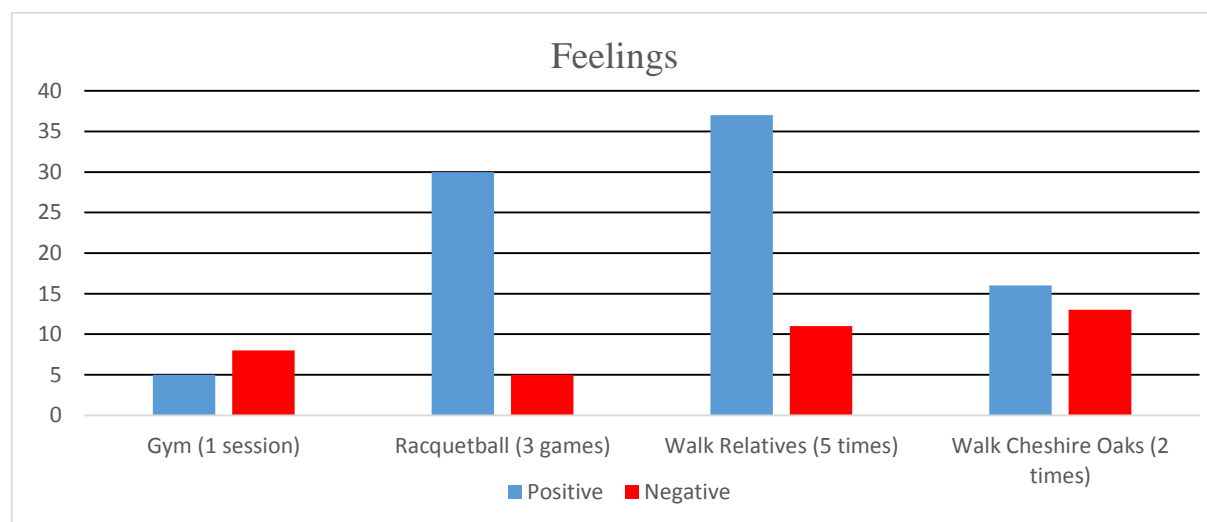


Table 8- Feelings towards exercise during intervention

Gym		Racquetball	
<u>Positive</u>	<u>Negative</u>	<u>Positive</u>	<u>Negative</u>
Determined	Tired	Looking forward	Harder than thought
Feel good	Aching	Excited	Tough
Feel happy	Tougher	Competitiveness	Tired
Happy to try	Out of comfort zone	Good realisation	Aching
Good standard exercises	Not as enthusiastic	Overall enjoyed	Very hot
	Bored	Good to play again	
	Not as enjoyable	Feels done some good	
		Different activity	
		Workout intensity	
		More energy	
		Not tired	

Walk relatives		Walk Cheshire Oaks	
<u>Positive</u>	<u>Negative</u>	<u>Positive</u>	<u>Negative</u>
Nice and relaxing	Tired	Determined	Feel rushed
Enjoyable	Aching	Happy it's done	Other problems
Spend time with son	Feeling rushed	Feel a difference	Tired
Feeling good	Other worries	New lease of life	Issues on mind
Feeling happy	Mid occupied	Feel good	Less excited
Nice weather	Leg is aching	Not tired	Aching
Good to do exercise	Apprehensive of weather	Not aching	Family worried
Get away from jobs	Apprehensive of leg	Looking forward to coffee	If on own would not have done it
Good mood		Feel productive	Hot weather
Good attitude		Feel refreshed	
Not tired		Confidence booster	
Feeling positive		Feeling benefits	
Good to have a break			

Observations- A collection of observations recorded throughout the intervention from the perspective of researcher/fitness instructor.

Table 9- Observations throughout intervention

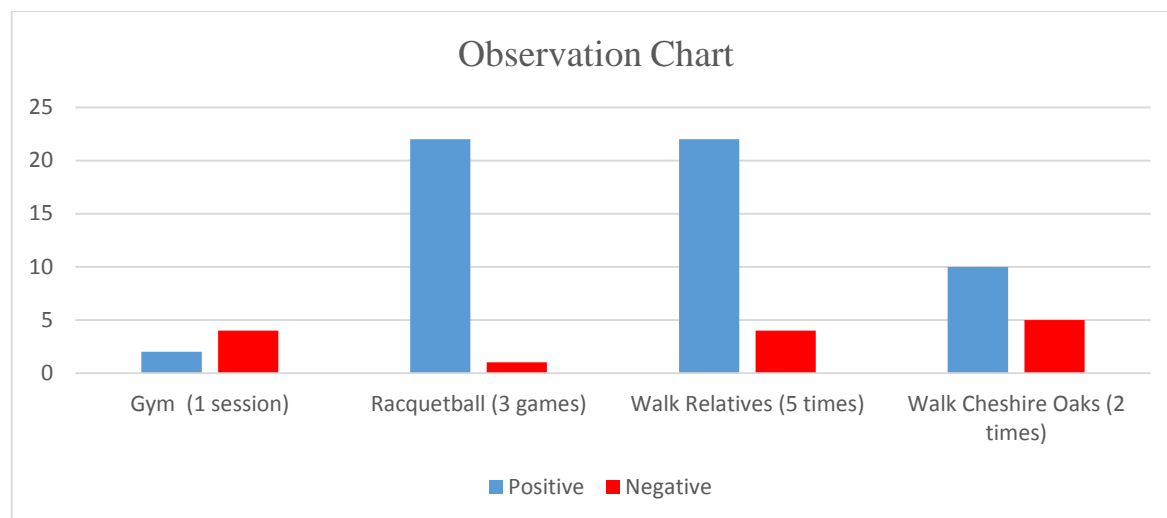


Table 10- Observations throughout intervention

Gym		Racquetball	
<u>Positive</u> Seemed determined Happy to try it	<u>Negative</u> Less enthusiastic Little bored Not as enjoyable Out of comfort zone	<u>Positive</u> Appeared excited Seemed eager Very happy Pleased with hard work Good mood Very positive Upbeat Thrilled not to ache More energy Appeared fitter Played longer	<u>Negative</u> Appeared annoyed Unfit
Walk Relatives		Walk Cheshire Oaks	
<u>Positive</u> Seemed eager Seemed happy Made time for it Very talkative Motivated Enjoyed weather Not aching Positive mood More energy Good pace Didn't put it off Committed No injury occurrence	<u>Negative</u> Other issues on mind Worried of weather	<u>Positive</u> Persevered Very happy to finish Proud to complete it Very happy Seemed positive Not tired	<u>Negative</u> Other issues Reluctant Looked tired Stressed/worried Unmotivated

4.3 Independent Activity Phase Data

Weight	16st 10lbs
TTM Phase	Preparation
GLTEQ Score	27, 18, 18 & 27

This section includes the data collected during the 4-week independent activity my father completed without the assistance of a fitness instructor. The data in this section includes his feelings during this period obtained from his diaries, the observations I made during this time as his son and also his overall feelings towards this part of the study which were collected during the final interview.

Table 11- Feelings towards exercise after intervention

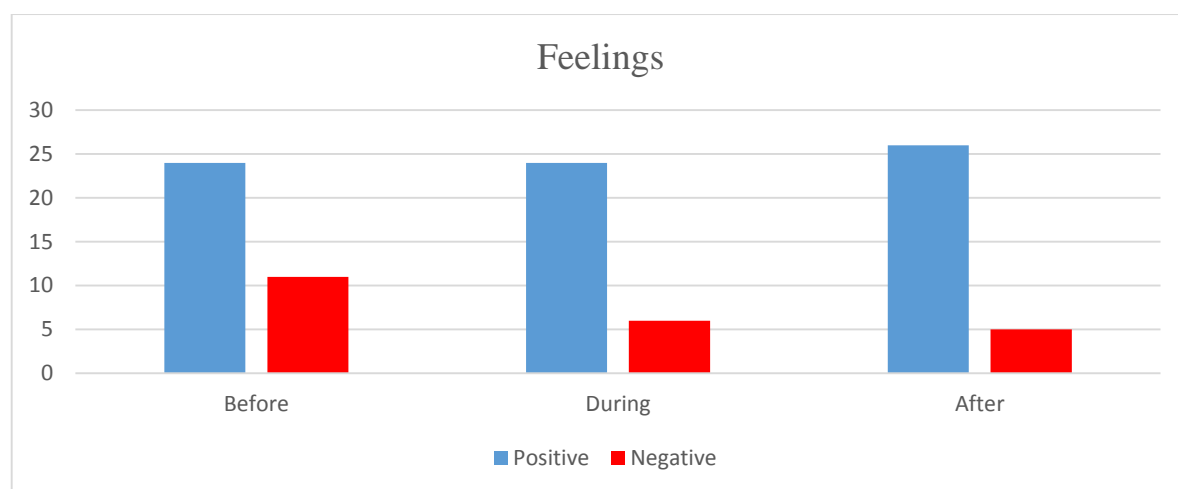


Table 12- Feelings towards exercise after intervention

Feelings Before		Feelings During	
<u>Positive</u>	<u>Negative</u>	<u>Positive</u>	<u>Negative</u>
Feeling good	Tired	Feeling good	Too hot
Energetic	Too hot	Feeling okay	Tired
Feeling okay	Weather changing	Tried new route	Hot & sweaty
Excited	Difficult to motivate	Nice weather	Hard work
Very happy	Won't be as enjoyable	Not feeling tired	Humidity
Determined	Busy day	Feeling relaxed	
Looking forward to fresh air	Back aching	Happy	
Really good		Noticed a difference	
Less work on house		Music passes time	
Quite rejuvenated		Looking forward	
Not tired/aching		Back feeling better	
		Enjoyable	

Feelings After	
<u>Positive</u>	<u>Negative</u>
Great	Tired
Enjoyable	Feeling hot
Glad to persevere	Weather not great
Good walk	
Good achievement	
Nice weather	
Achievement	
Happy with the effort	
Very happy	
Not feeling tired	
Tried new route	

Observations- A collection of observations I made throughout this phase.

Table 13- Observations after intervention

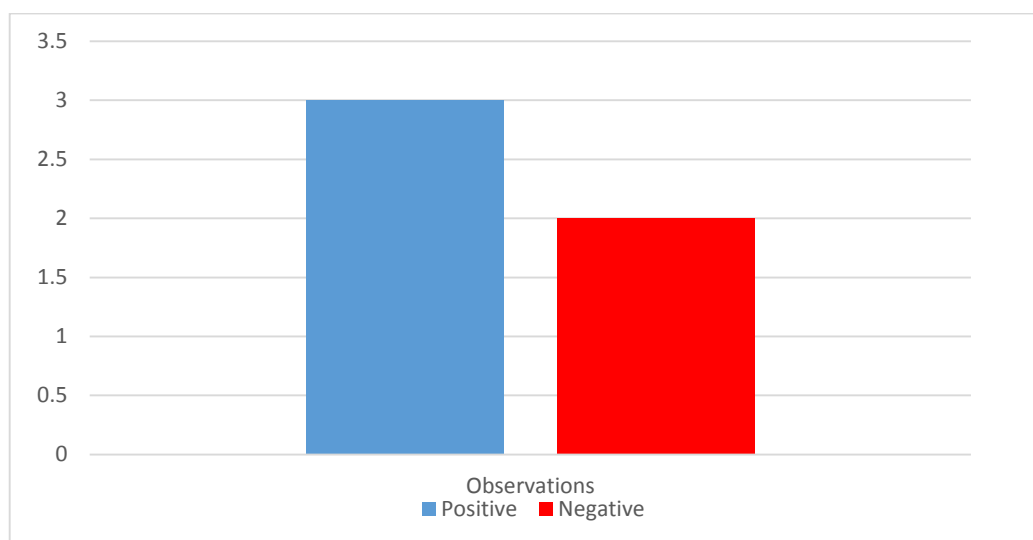


Table 14- Observations after intervention

Observations (Son)	
<u>Positive</u>	<u>Negative</u>
Made an effort to walk to Cheshire Oaks	Missed opportunities to walk*
Did a lot of walking on his own	No attempt to play racquetball
Tried different routes to avoid getting bored	

* One of the first days into the independent phase we took a trip to an antiques shop with Nan & Grandad which included picking them up, however, he decided to drive to Nan & Grandads instead of walk. He would have been able to walk as another family member could easily have followed in the car. I felt this was an opportunity missed, however restricted myself from offering this suggestion beforehand as I was

no longer a fitness instructor, and as his son, this is something prior to the study I would not have encouraged.

Table 15- Final interview responses

Reasons for being in the 'Preparation' stage Quotes in blue represent a positive impact on activity Quotes in red represent a negative impact on activity	Not exercised as much as intervention Being away on holiday Harder to motivate myself Nobody to play racquetball with
Overall how do you think the past 4 weeks went and are you happy with what you completed? Quotes in blue represent a positive impact on activity Quotes in red represent a negative impact on activity	Partly Happy Achieved more than prior to intervention Helped understand and encourage me to do more Been difficult with going away Not been able to play racquetball Not used the gym Only exercise is walking No high intensity activity However overall done more exercise than if I hadn't completed the intervention
What influenced the lower GLTEQ scores in weeks 2 and 3? Quotes in blue represent a positive impact on activity Quotes in red represent a negative impact on activity	Going away for long weekends Wasn't particularly doing any exercise Did do walking Nowhere near to same extent Weather affected how much walking also
Were there any other incidents that affected your physical activity levels? Quotes in blue represent a positive impact on activity Quotes in red represent a negative impact on activity	Weather Long weekends away
How did it make you feel that you had put on weight during the 4-weeks independent activity? And was it de-motivating? Quotes in blue represent a positive impact on activity Quotes in red represent a negative impact on activity	Wasn't surprised Not done near enough exercise as in the intervention Not enough strenuous exercises Drinking more alcohol and eating junk food Been out for a few meals But I know where I've probably gone wrong Know why it happened Was disappointed However not overly concerned Not de-motivating Motivated me more to get back to normality
How do you feel the weight put on could have been avoided? And could you have pushed yourself a bit more?	Doing more activity More strenuous activity Finding other activities Should have pushed myself more

<p>Was it harder to motivate yourself without having a fitness instructor?</p> <p>Quotes in blue represent a positive impact on activity</p> <p>Quotes in red represent a negative impact on activity</p>	<p>A lot harder</p> <p>If you get on with someone it will help you exercise more</p> <p>Far more enjoyable with someone else</p> <p>Other person can encourage you</p> <p>You may get better results also with fitness instructor</p> <p>Enjoyed exercise far more during the intervention</p>
<p>The study was aimed at overall increasing your physical activity levels. Would you say this was achieved?</p> <p>Quotes in blue represent a positive impact on activity</p> <p>Quotes in red represent a negative impact on activity</p>	<p>It has been achieved</p> <p>Comparing the first baseline week to now then yes</p> <p>Even on my own there is an improvement</p> <p>Even with the lowest score in the independent weeks, still higher score than baseline</p>
<p>Did the intervention help you understand the extra physical activity you can complete?</p> <p>Quotes in blue represent a positive impact on activity</p> <p>Quotes in red represent a negative impact on activity</p>	<p>Yes because planning was involved</p> <p>Important to plan the day</p>

4.4 Data Comparison

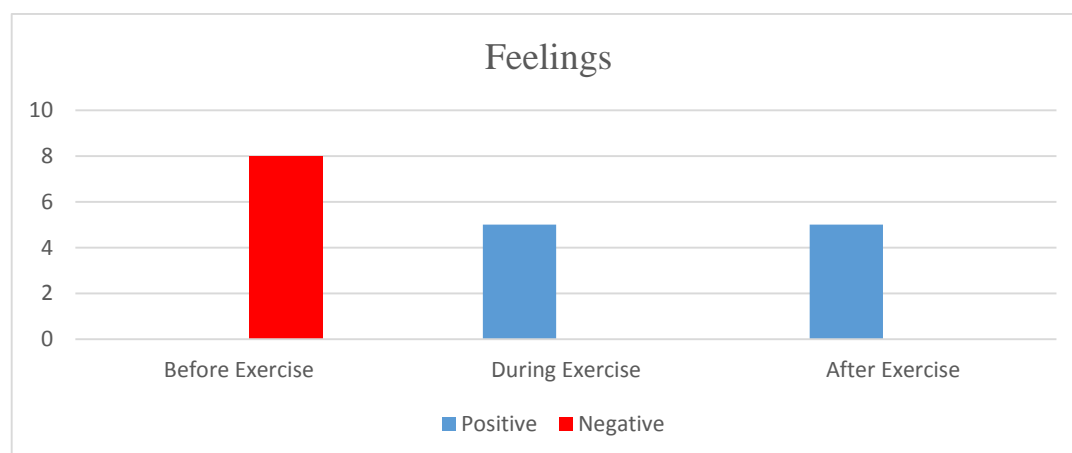
This table includes the comparisons between my father's weight, stage on the TTM and GLTEQ scores from throughout the study, starting from the baseline week through until the end of the 4-week IA. This allows an easier way of comparing important data ahead of the discussion which will allow an in-depth exploration of the study.

Table 16- Comparison of weight/TTM/GLTEQ throughout study

	<i>Before</i>	<i>During</i>	<i>After</i>
<i>Weight</i>	<i>16st 9lbs</i>	<i>16st 5lbs</i>	<i>16st 10lbs</i>
<i>TTM Phase</i>	<i>Contemplation</i>	<i>Action</i>	<i>Preparation</i>
<i>GLTEQ Score</i>	<i>15</i>	<i>42 & 36</i>	<i>27, 18, 18 & 27</i>

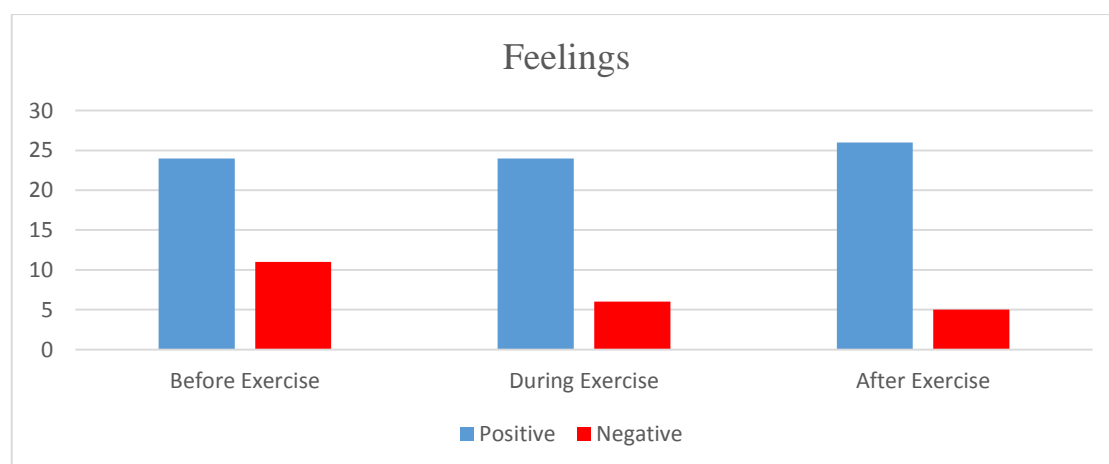
Before Intervention- This graph is from the pre-intervention phase and displays my father's feelings towards exercise prior to the intervention

Table 17- Feelings towards exercise before intervention



After Intervention- This graph is from the independent activity phase and similarly displays my father's feelings towards exercise after the intervention

Table 18- Feelings towards exercise after intervention



Chapter 5. Discussion

The premise of this study was to observe any change in my father's behaviour towards physical activity. Observation would be effected through the assessment of any increase in his physical activity levels achieved during the period from commencement to the conclusion of the study. This study method was centred on the creation of a 2-week intervention, with myself as the fitness instructor.

By analysing and comparing the GLTEQ score with my father's current perceived stage in the TTM (see table 19 below), an increase in physical activity was indeed achieved. However, there are other factors that occurred which could suggest the success was not as promising as the results would suggest.

Table 19- Comparison of weight/TTM/GLTEQ throughout study

	<i>Before</i>	<i>During</i>	<i>After</i>
<i>Weight</i>	<i>16st 9lbs</i>	<i>16st 5lbs</i>	<i>16st 10lbs</i>
<i>TTM Phase</i>	<i>Contemplation</i>	<i>Action</i>	<i>Preparation</i>
<i>GLTEQ Score</i>	<i>15</i>	<i>42 & 36</i>	<i>27, 18, 18 & 27</i>

Firstly there is change in my father's attitude to exercise before an activity, from his stated position at the outset of the study compared with that post-intervention, it appears that he now has a more positive attitude (see table 18). During the initial interview prior to the start of the intervention he failed to identify any positive views about physical activity (see table 3), however upon reviewing his final diaries written during the 4-week independent activity (4-week IA), phase he appeared to have adopted and identified several positive views of exercise (see table 11). There were still some negative observations on the part of my father, such as him being tired or aching (see table 12).

5.1 Retirement

Previous research has suggested that recent retirement is indeed associated with increased levels of physical activity (Engberg et al. 2012) and this can be attributed to several factors including time flexibility, change to daily routines and awareness of long term health (Evenson et al. 2002). However, Chung et al. (2009) contests this theory and state that in fact if an individual was retiring from a physically demanding job, there is a greater chance there would be a *decrease* in physical activity levels, as opposed to an individual retiring from a sedentary career which is linked to an *increase* in physical activity. As identified in the first interview, my father in recent years had stated that lots

of driving with his job and shift work coincided with sedentary behaviour (see table 2), therefore according to Chung et al.'s. (2009) study, my father's physical activity levels should see an increase once retired. However, my father's GLTEQ baseline score prior to the intervention was in fact 15 and it was noted that in the four months since his retirement there appeared to be no attempt to be more physically active. It took this intervention to initiate an increase his physical activity levels. However my father also identified that there are still barriers to exercising regularly, he cited examples such as house renovations, bad weather and family demands (see table 2). Chung et al. (2009) do not appear to acknowledge any barriers that could be perceived which is a weakness of the study. So despite my father not increasing his physical activity levels to begin with, there were barriers that affected his involvement with exercise. Therefore, it was a primary objective of this study to identify those potential barriers and overcome them, as this was previously identified as an important way of minimising barriers for clients from the fitness professional's perspective (Dalglish & Dollery, 2001, p.11). Based on the intervention GLTEQ scores of 42 and 36, a noticeable increase of physical activity was achieved (see table 16). A study conducted by Lahti et al. (2011) identified extra free time available as a possible opportunity for increased physical activity to recently retired individuals, but again in a similar way to the study by Chung et al. (2009) the study failed to identify any barriers to the increase in participation and in addition worked on an assumption that all recently retired people would inevitably have extra free time, instead of understanding and researching any barriers that could hinder an increase in physical activity. In contrast Ransdell et al. (2009) do identify the importance of understanding barriers to participation. The overall use of the GLTEQ calculation which was used in a study using cognitive behavioural therapy interventions (Schneider et al., 2004) was of great value in this study as it allowed constant monitoring and an opportunity to collate data about the amount of activity completed. Therefore there was greater reliability with the scores and contributed to the integrity of the study.

5.2 Theory-based intervention

Within the literature review it was established that when developing an intervention it is important to select a theory-based intervention combined with a behaviour change intervention (Bartholomew, 1998; Michie et al. 2008). Therefore, the use of the TTM was an essential part of this study as it enabled my father to identify the different stage within the model that he had achieved at varying times of the study. It was to be

expected that during the intervention my father would move to a stage involving regular activity compared to the baseline, due to the fact that the role of the fitness instructor was to ensure that during the 2-week intervention, at least 5 days a week involved some form of exercise, so compared to his baseline an increase would occur. It followed that the TTM stage my father achieved at the conclusion of his involvement in comparison to at the start coincided with the increase in the GLTEQ scores from 15 in the baseline week to 27, 18, 18 and 27 in the independent activity weeks (see table 16). Therefore an increase has been achieved based on the understanding of the TTM and GLTEQ. Prior to this study criticisms of the TTM were identified, however it was concluded the TTM was a suitable choice for individuals because it allowed a consistent way for my father to understand which stage of the change process he was at.

5.3 Perseverance

As opposed to the gym, in which there appears to be more negative feelings, walking contributes to a lot more positive feelings with my father (see table 7), and in fact this is also noticed from the observations made (see table 9). During the intervention we either walked to a relative's home or to Cheshire Oaks, a local retail park. On the feelings chart in the intervention phase it appears that my father had far more positive feelings during the walks to the relatives than Cheshire Oaks (see table 7), however, when studying the diaries the first walk to Cheshire Oaks coincided with a day of worries associated with the house, which made the 'exercise rushed, less enjoyable and less exciting' (Appendix B, *Week 1 Day 4*, page 74). My own observations also agree with this as my father appeared worried throughout the walk. These negatives, unlike the trip to the gym, were not associated with the activity itself however, rather other occurrences throughout the day. Walking is an activity, that based on his 4-week independent activity appears to be one my father enjoys the most. My father also noted that the day he was worried, had he not been taking part in an intervention, he would not have completed the walk. However once completed he did feel pleased to have persevered. The conclusion which can be drawn from this particular incident is despite feeling negative before and during the exercise, in the aftermath my father was happy that he had persevered with the exercise. Other feelings he noted throughout the walking that occurred more than once were the weather, feeling tired and aching (see table 8). However, as the intervention continued into the second week he started to notice a difference in the lack of tiredness or achiness which had a positive impact on him. There was one occasion during the independent activity that I observed whereby my father

opted to drive instead of walk in circumstances when he could and *should* have walked. However I am satisfied that because of his enjoyment of walking this was merely an opportunity missed inadvertently, as opposed to consciously opting out of an exercise (see table 14). Furthermore, throughout the 4 weeks on his own, I was impressed to read from his diaries that he had walked different routes for either a more scenic route or to avoid becoming bored of the same route. Plus he also walked along the promenade in New Brighton, however he did have to drive there as it is too far to walk but that does beg the question why he needed to drive somewhere to walk! I was pleasantly surprised to read that he had attempted new routes and different walks as it demonstrated my father was experimenting other ways to keep himself interested in walking, and these new routes often lasted longer so that increased his amount of exercise.

5.4 Success

The success of the study coincides with conclusions of Rodearmal et al. (2006) that family-based interventions over a short period of time can create small lifestyle changes towards physical activity. Indeed from this study and the analysis of the data there was an increase in physical activity based on a short term intervention. However, perhaps there should be an emphasis on the relationships between the family members. My father stated throughout the final interview that the intervention worked because he was spending time with a family member (myself in the role of son, fitness instructor and ethnographic researcher) that he had a great relationship with, so therefore it is easier (see table 15). However the success of this study may have been very different if we did not enjoy such a good relationship and my father was unwilling to change his behaviour. Therefore this should maybe be a consideration with all family-based interventions, and in order to increase the chance of success, perhaps learn of the current relationships in the family first and understand the willingness of the family. Despite the findings of the Rodearmal et al. (2006) study, Ransdell et al (2008) argue that to achieve greater success, it is advisable to first any limit behaviour change targets to just one target, then proceed once that has been achieved. The success of this study is due to the fact I followed the same reasoning by focussing on one element i.e. physical activity. It could be argued that a further aim of this study could have been a focus on my father's diet, however adopting the rationale Ransdell et al. (2008) I felt as a researcher it would be more productive to focus the aim solely on increasing physical activity. This study would seem to agree with the notion that attempting to create behaviour change should be based around one aim to start with. Holm et al. (2012) found that family-based

interventions were an effective approach to treating overweight and obese family members. This study similarly focussed solely on one aim with increasing steps taken per day. Further supporting the argument that for maximum results there should be a concentration upon one target.

The analysis of my father's activity throughout the 4-week independent phase compared to the actual intervention raised some notable findings. Interestingly, yet unsurprisingly, my father did not complete any 'high' intensity exercises. During the intervention, 2 'high' intensity activities were completed each week (3 games of racquetball and 1 gym session in total) however my father completed none of these in the 4-week IA. My father mentioned in the final interview that he had no-one to play racquetball with (see table 15), which is partly true, however from my own observation as his son, while I was only in his presence a minimal number of times, my father made little effort to ask me to racquetball. Secondly, the lack of gym sessions was of no real surprise, mainly because in the first interview my father indicated he did not enjoy using weights and that the only machines he used in the gym were walkers, cross trainers or the bike (see table 2). Furthermore, when we did attend the gym during the intervention, based on my father's diaries, he experienced more negative feelings than positive feelings (see table 7). So perhaps having greater negative feelings contributed in his decision to not partake in another gym session. In the diaries he stated he was 'not as enthusiastic, found it a boring activity, it was out of his comfort zone and the gym was not as enjoyable' (Appendix B, *Week 2 Day 2*, p. 75). Additionally, from my observations made as a fitness instructor, there were in fact more negative observations than positive including 'looking less enthusiastic, appearing bored and out of his comfort zone' (see table 10). So perhaps it is of no surprise that in the 4-week IA my father did not use a gym. Instead throughout the 4 weeks, all his activity was scored by walking.

Another potential reason for the success of this study is the fact that the intervention was home-based. As a fitness instructor I thought it would be important to plan an intervention based on my fathers preferred activities and tailor them to effective workouts in an environment in which he was comfortable. Based on his preferences the intervention involved lots of walking and games of racquetball, as identified by my father during our first interview. Also, taking into consideration my father's views the intervention contained only one gym session, as my father expressed that he does enjoy using *some* pieces of equipment in the gym (see table 2). However during this scheduled session he expressed the view that he felt out of his comfort zone so we persisted with

walking and racquetball (see table 10). Perhaps future studies should create interventions based on a participant's favoured activities, and in an environment in which they feel most comfortable. During the second interview my father did admit he was unsure whether he would have completed the intervention had it of been all gym-based activities, supporting Robinson & Rogers (1994) belief that home-based interventions have better adherence rates.

My father's feelings towards exercise show that before the intervention he had only negative feelings towards any activity before he undertook the exercise. That can be contrasted with more positive feelings during and after exercise (see table 3). At the conclusion of the intervention, it can be seen that whilst there are still some negative feelings before he starts an exercise, there are far more positives which has seen a substantial increase from the beginning of the study, when he did not mention one positive feeling (see table 18). The feelings he felt during and after exercise were only positive prior to the intervention, however according to his own diaries there appears to be some negatives, however, similarly to his feelings before exercise, the positives far outweigh the negatives. The negative feelings that occurred regularly included 'feeling tired and achy' (Appendix B, p. 73-77) however as the intervention developed these negative feelings became few and far between and in fact my father started to feel less tired after exercises and stated he occasionally felt he had more energy. From my own observational position, it was my view that during the final game of racquetball I felt he moved about the court much better (see table 10). Even though the result of the matches were not recorded, my father won the last time we played, whereas I won the earlier games. I felt I won the first games due to a better fitness level as opposed to skill, whereas the increase in my father's fitness level contributed greatly to his ability to win the last match.

5.5 Method limitations

Prior to the intervention, based on observations as his son, and my father's own comments in the first interview, he was someone who had periodically tried to make changes to his lifestyle by introducing more physical activity however had always experienced a relapse after a short period of time (see table 2). However, several times my father had attempted to change his behaviour and furthermore had a willingness to do so, especially since his retirement. The decision to develop an ethnographic study was greatly beneficial as it allowed me to live with my father and observe his attitudes towards the exercises leading up to completing them and experience this first hand.

Whereas if an ethnographic approach had not been applied then these observations would not have been made. Sands (2002) suggests that as an ethnographic researcher you must be prepared to be flexible and record data at any moment as the opportunity presents itself, therefore always carry a notebook around to make notes of data (Gratton & Jones, 2010, p. 204). This type of data collection was undertaken throughout the ethnographic study phase, so therefore it was beneficial for me to carry a notebook and to note any observations 'in the moment'. This offered greater reliability compared with trying to recall those observations at a later point during the day.

The interviews with my father were conducted in different venues, the first interview took place in a private room in the University library, the second in my father's home and the final interview in my own home. It may be suggested that the venue of interview may have contributed to my father's feelings at the given time and therefore affect the responses given, however it must be stressed that when arranging a time and location my father was given responsibility to decide the venue and the time that suited him best, minimising any such concerns.

5.6 Potential disappointments

Despite the increase of physical activity from the baseline to the final week of independent activity, my father put on 5 pounds of weight throughout the 4 week IA (see table 16). When I asked about this in the interview my father appeared only minimally concerned because in the 4 week IA he had been away, eaten junk food, drank alcohol and found it harder to motivate himself which he felt contributed in not completing as much exercise as he would have liked (see table 15). My father has mentioned in the previous interviews that weight loss is an important consideration and he felt a healthy diet and regular physical activity work simultaneously in an effort to lose weight. Also he mentioned the bad weather which hinders the amount of walking he can complete (see table 2). With walking being the only activity he completed throughout the 4 week IA it could be argued the GLTEQ scores may have been even greater had the weather been suitable for long walks. For my father, he considered the intervention a success because he was undertaking more physical activity, and in addition he stated the intervention helped him understand the benefits and encouraged him to do more exercise (see table 15).

Unfortunately, the success of this study may be considered relatively limited because the study is based on short term success, so offers no overview of potential long term

success. Additionally my father mentioned in the first interview that previous attempts at changing his behaviour such as joining gyms, buying equipment and self-motivation only offered short term success and was not a long lasting change (see table 2). This is also backed up from my own observations throughout the years (see table 5). So there is an argument that the increase in GLTEQ score and movement through the TTM stages is only short term success and because of previous relapses, may not turn into a long term success, however it is important to note that my father has not attempted this type of intervention before.

Nevertheless, as mentioned above my father encountered greater positive feelings before exercise at the end of the study than those he experienced before the study began, which is an improvement and that for the short term he is more physically active than he originally was, which can contribute to good health.

Chapter 6. Conclusion

Based on the aims and objectives stated in the introduction of the study, it is argued that this study was a success. Despite this, questions may arise about the weight my father put on in the 4-week independent activity. From an observational perspective and also by admission my father he did not complete as much activity as he could have, or in fact, *should* have. As identified above whilst my father was more physically active than before the intervention phase, he evaded high intensity activities, which he feels may have partially contributed to his weight gain. Additionally, throughout the intervention my father started to feel less tired during exercise and this was observed also, especially playing racquetball. However because my father failed to play any racquetball throughout his 4-week IA any greater fitness levels were not improved upon to a higher level.

This study highlights the importance of planning when to complete physical activity, as this was easier to adhere to when the intervention was pre-planned. Another important factor was the ability to identify and understand potential barriers to physical activity and create an intervention based on the participants enjoyed activities.

The implementation of the TTM was of great benefit as it allowed my father to identify different stages he experienced throughout the study, and in future could serve as a motivational tool in targeting to reach stages of higher maintenance levels. Additionally the use of the GLTEQ to record any activity completed was a useful way of keeping track of a weekly score, which helped my father, and myself, to assess the increase or decrease in activity.

On a personal level, I have learnt that perhaps I could further encourage my father, by engaging in more regular physical activity with him. It was interesting, and pleasing as his son, to discover through the interviews how much more he enjoyed activity when I was involved. Despite being his fitness instructor during the intervention the father/son relationship was always present and that is something that cannot be ignored. Therefore this study has made me aware that I can contribute to his physical activity levels by simply completing the activities with him.

6.1 Limitations and future recommendations

There are a number of recognised limitations to this study. These include the time period for completion, which only enabled this study to look at the short term effects. Perhaps a future study could look at a longer intervention and a longer period of time

for independent activity. Secondly, there may be very few occasions for this study to be replicated in a similar form as the criteria was very strict. Not only would a retired family member need to be selected, however they would need to be willing to change behaviour, have a positive relationship with the researcher and have time for an intervention. Additionally, the researcher would need to be a qualified, experienced fitness instructor, have knowledge of ethnographic research and behaviour change theories and finally have time to research the participant's history in physical activity and barriers. However despite the specific criteria involved, other studies could take important aspects of this study and use them in the future. Thirdly, the intervention and 4-week IA was revolved around my father's favoured activities, previously mentioned is that the bad weather affects how much walking he can complete, however this study was conducted throughout the summer, so the majority of the time the weather was of a benefit. Whereas had this study taken place during the winter months it could be argued the study may not have been a success. Which also questions that when the winter months come around and the weather changes how will my father stay physically active? Perhaps a future study could look at offering a wider range of activities that do not necessarily depend on the weather.

Another potential future study could look to differentiate between muscle mass and body fat, this perhaps would create a much more physiological study however could identify if any weight gained is in fact muscle as opposed to fat.

Overall, from this study, while the short term behaviour of my father has changed, based on his increased physical activity, his behaviour change in the long-term remains uncertain.

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Appendix A- Interview question sheets accompanied by transcripts

Interview 1

Hello, thank you for taking the time to complete this interview process. I would first like to confirm that any information you give today will be recorded, however will only be listened to by myself and possibly my dissertation supervisor. The contents of this tape will be kept solely in my possession under password protection. Please answer the questions in as much depth as possible and as truthfully as you can. If at any point during the interview you would like to stop or you feel uncomfortable do not hesitate to mention this and the interview will be suspended. As you have already completed the barriers to participation questionnaire I may ask some questions based on this just to get a greater understanding. Are you happy to continue with the interview process?

Transtheoretical Model (Biddle & Mutrie, 2008)

Please select the stage you feel you are currently in in relation to physical activity/sport or exercise

Precontemplation- I am currently not physically active and have no intention of doing so in the near future.

Contemplation- I am not currently active either, however have an intention to start in the near future.

Preparation- I am currently exercising some but not regularly, however plan to take action within the next month to exercise more.

Action- I am currently active, however have only recently started so am still at a high risk of relapse.

Maintenance- I am currently regularly physically active and have been for some time, at least six months.

Interview Questions

- 1) How long would you say you have been in this stage for? Please explain or give examples
- 2) Can you give a brief history of any sport or exercise throughout your adult life, starting from when you were younger to now, and identify any key influences or moments that relate to physical activity?
- 3) Why do you feel this change occurred?
- 4) How did you try to create change previously?
- 5) And did this work?
- 6) When you exercise now, how do you feel beforehand?
- 7) And how do you feel during it?
- 8) And how do you feel after it?
- 9) What do you feel would help in increasing your current activity levels? E.g. personal trainer? Gym buddy?
- 10) What is it in particular you do not enjoy about exercising?
- 11) With the barriers you mentioned on the questionnaire, can you go into further detail about how the barriers affect your involvement in physical activity/sport or exercise?

Probe Questions

- What made you feel this way?
- Can you explain this in further detail?
- How did this occur?
- How did you feel during that time?
- Could you have done anything to change this?

Interview 1 Transcripts

Hello, thank you for taking the time to complete this interview process. I would first like to confirm that any information you give today will be recorded, however will only be listened to by myself and possibly my dissertation supervisor. The contents of this tape will be kept solely in my possession under password protection. Please answer the questions in as much depth as possible and as truthfully as you can. If at any point during the interview you would like to stop or you feel uncomfortable do not hesitate to mention this and the interview will be suspended. As you have already completed the barriers to participation questionnaire I may ask some questions based on this just to get a greater understanding. Are you happy to continue with the interview process?

SE: Yes I am yeah

Fantastic, okay first I would like you to identify on the Transtheoretical Model (Prochaska & DiClemente, 1983) the stage you feel would best represent your current status in relation to physical activity/sport or exercise.

SE: Right I would say contemplation

JE: Contemplation?

SE: At the moment yeah

JE: Okay, thank you, okay, so you believe you're not currently active however you do have an intention to start in the near future?

SE: Yes, that's right yeah

JE: Okay, ermmm and how long would you say you've been in this stage for and can you any, you know explain this in a bit of depth or give any detail or examples of why you feel your in this stage?

SE: Ermmm I retired from full time employment erm at the end of February this year err and since then I've been trying to start a business off as well as doing some house renovations which has taken a lot of my time, so since finishing work in February erm I haven't really had the inclination or the time to pursue any exercise due to work commitments from self-employment side and also doing work on the house, which is gonna change in the very near future once the house is finished and obviously the work side will become easier as time progresses.

JE: Okay thank you, okay so I'm going to ask a couple of questions kind of relating back to erm sort of 20 er, in your twenties

SE: Okay

JE: So a long time ago, erm, can you give a brief history of any sport or exercise throughout your adult life starting from when you were younger to now and in that can you identify any key influences or moments that relate to physical activity that maybe influenced you or not

SE: Alright if I start off from when I was sort of 20 I used to work in a sport centre as a lifeguard, as a swimming teacher, because I worked in that environment I played a lot of squash, I played league squash at the time I entered swimming competitions and also life saving competitions so err at that time in my life I was very active obviously I wasn't married, had no family commitments, and my work involved being involved in the fitness industry really, so that really went on until I was about 24 when I joined the police and initially within training you do a lot of physical activity which I had no problems with having come from the sports centre and I did continue at that time with playing squash although on a greater diminished amount due to moving locations moving from where I used to live to where I had to live to join the police so that gradually phased out. I kept pretty active for the first couple of years in the police because I was a foot bobby, so I was probably walking 10-15 miles a day err which was really good and then it all went downhill when I started driving police vehicles being on shift work 3 shifts was very tiring err you were driving so you were getting no activity no exercise then I obviously got married err brought up a family err the whole combination of that with working shift work, nights used to be a killer resulting in eating plenty of chocolate and crisps because you get hunger pangs at say 4 in the morning I supposed some people call it a sugar rush you need sugar to keep yourself awake and stuff like that, and because you're sitting on your backside all day in a police car that doesn't help you and I did become fairly inactive for a period and then with my brother-in-law I got him interested in playing squash so we joined a gym and we were playing squash about 3 times a week and that was probably the only exercise I did, I wasn't really a gym user, I didn't particularly enjoy that, I didn't mind going on say the cross trainer or the treadmill but I certainly wasn't into weights or anything like that at all so I did try and do some activity and in the police station we did used to have a small gym but again you could only use that out of hours so you couldn't use it in any work time so probably most my career in the past 30 years in the police the only activities I've actually done is play squash, which was okay until I tore my Achilles tendon and that put me out of doing any exercise for a couple of months and then the lad I used to play squash with he had an injury so that really brought an end to the activities and after that the only activities I did I used to walk with my wife we used to say go down New Brighton it was like a 4 mile walk and then if she was working lates I would walk down and meet her at work, where she works that was about another 4 mile walk and I used to enjoy doing that when the weather was nice but I know I want to try and get back into, into getting fit again, I'm 54 now now I've retired from full time employment although I am trying to start my own business off I want to be able to fit some fitness around working self-employed because it is important to try and increase my fitness, that's probably it in a nutshell.

JE: Okay thank you so would you say that, when I mentioned about err, key moments that you mentioned you kind of seem to know that in your mind you know that when you started driving police vehicles and you no longer was a foot bobby and you had a family that was kind of like, was a distinct moment in your life that you of think that's started.....

SE: I would say that's when it becomes very, very difficult to continue to do some sort of exercise because you have a lot of other priorities you have to deal with, certainly working within the police force, although may see bobbys as being fit and all the rest of it because your on 3 shifts and your doing quick turnarounds it is tiring and also you had

compulsory overtime to do you know you didn't have set hours you know you'd be kept on for a extra couple of hours so that was quite tiring and having a family and bringing up a family that did make it harder as well because you want to spend time with your family as well so you weren't inclined so much to say I'm going to do this that or another because if you did you'd be missing your family growing up so the conscious decision is that exercise was put on the sideline a bit.

JE: Yeah okay, Erm, you mentioned as well about playing squash which was kind of one of the activities, can I ask why squash? Why not anything else?

SE: Squash because when I worked at the sports centre I'm going back to the early 80's, erm, gyms weren't a big thing and in fact the sports centre where I was working then was just a swimming pool and squash courts, so I was obviously involved with a lot of swimming & life saving competitions but we also played a lot of squash because that's' racquetball wasn't really known of then whereas it was squash and because I had the facilities to use you know we used to have teams, staff teams and staff competitions as well as you know playing members of the public that came in as well, so that's why squash was, I was never one for team sports

JE: Yeah

SE: I was no good at team sports, whereas that's an individual sport (squash) erm and I used to enjoy it so that's why I played squash purely because the facility was there and because of the opportunity to play it.

JE: Would you say then that you prefer, or find more enjoyment from playing an individual sport than a team sport

SE: Yes definitely, rather play an individual sport than yeah

JE: Okay, erm so throughout that history that you just gave, did you try to create change previously, so were there times that you thought you know I've not been as active as what I should or have there been times that you've thought I would like to try and exercise or I want to try and get myself in good shape, to lose weight or to just be physically active, errr have there been times that you've tried to create change?

SE: Yeah there have been, I mean, I think as your life progresses you do try to influence yourself, we all know that if you keep yourself healthy and keep fit you have a better lifestyle really, a better quality of life so I have gone through phases where I have joined a number of different gyms trying to encourage myself as I said not to go into gym equipment but sort of cardio vascular sort of equipment ermm cross trainers, walkers stuff like that and racquet sports I have tried to go and do that certainly if you don't go and exercise you put weight on, once you start to put weight on your joints start to ache more you know you get back pain more and you become more aware of this as you get older and you know that you need to make an effort so I wouldn't say it's been specific times when i've thought I need to go and do that I think it's just a way of life when your starting to ache a bit more and you put weight on you don't feel particularly happy with the way your going, you think I need to make an effort, sometimes that effort has been to join a gym and in fact we also bought some gym equipment at home you know we've got a cross trainer at home we've got a runner at home got like abs crunchers and stuff like that and we've got a building in the back of the garden where that equipment is and I do go through a phase where I do try and push myself to go on that equipment in the

back garden and do some sort of activity because a lot of the time it is because I've weight on or it's because I'm starting to feel a bit achey and I become more and more aware of I'm not getting any younger I'm getting older and so at some point you have to make an effort

JE: Okay, obviously you mentioned there about purchasing gym memberships, joining a gym, buying equipment yourself for your own home, did this work? In changing your behaviour

SE: Ermm, the gyms did work for a while I stopped going to the gyms probably because I was coming across too many people I was actually dealing with in work and not in a colleague sense either people I'd arrested or had dealings with and it wasn't really a very good environment to be as a police officer to be going in the gym and knowing criminals going to the same gym as yourself so that did cause a few issues which probably stopped me going to the gym, the cost wasn't really much of an issue it was more to do with the calibre of some of the clients that were going to the gym that could potentially have put me in a difficult situation the equipment at home, again that's up and down really and I don't know what the answer to that was it's at times you seem to get a bit of an extra push to go and do it and it goes by the way side again certainly in the winter months it's harder because it's dark nights and it's cold and it's this that and the other, but I suppose out of all the things probably having your own equipment is the best as long as you've got self-motivation probably to go and use it.

JE: So do you think then, you mentioned that sometimes you'll have that bit more motivation or more of an urge to do some physical activity or do some exercise

SE: Yeah

JE: But sometimes you don't so psychologically you think, it's a massive, it's a big factor in if you use the gym or not or use your own equipment

SE: I think it is psychologically and I also think it's a bit of forward planning and it's a matter of not leaving it day to day to decide what you doing I think maybe one of the answers is to sort of, forward plan what your doing in the week or the forthcoming week and make a note of you saying I'm going to do this on Tuesday or Wednesday or whatever and make sure you put some time to one side to go and do it

JE: Okay thank you, next question, when you exercise now, how do you feel beforehand?

SE: Normally, I just can't be bothered and just don't want to go and do any exercise ermmm

JE: Can I ask why? Like why do you think that is?

SE: I suppose a lot of the time because it's maybe because it's coming towards the end of the day or because I've done something beforehand erm and probably because I haven't pre-planned and thought about doing the exercise, so when I am going to do the exercise maybe you are feeling a bit tired and a bit drained and not particularly looking forward to going and doing it

JE: Okay thank you, how do you feel during the exercise?

SE: Erm, during the exercise if I've got some good music to listen to or something to watch on the TV while I'm doing the exercise I don't mind, once I'm actually doing the exercise I quite enjoy it yeah

JE: Good, erm how do you feel after it?

SE: I would say the majority of the time I feel quite after doing exercise, once you've had a shower you feel positive once you've done it, you know it gives you a bit of a boost you know your glad you've done it and then in a way it stops you from probably eating things you shouldn't eat as well because I think those 2 things go hand in hand I think you find, I find when I do exercise I'll eat more healthily because I don't want to undo maybe some good I've from doing the exercise so I do normally feel quite good once I've done the exercise

JE: Okay, so obviously you've just mentioned there I asked you about how you feel beforehand, during and after it and so would you agree the struggle for you is having that sort of is actually getting into the gym or getting in to do the exercises because you've mentioned there actually during and after it you feel quite good about it and especially after it you feel better because you have actually pushed yourself to do it so do you feel the barrier or the big obstacle for you is actually getting in that gym?

SE: It is, I think it's it's getting in the gym and it's planning your time to give you time to go in the gym ermm sometimes it's the last thing you'll do is I'll go in the gym because there's always something else to do or so it's making that conscious effort to put to one side 30 minutes or 40 minutes which in the whole scheme of things is nothing but I think sometimes it's, it's more pre-planning to say I'm going to do this you know the day before, the week before and plan it into your schedule what your going to be doing in the forthcoming few days.

JE: I'm just going to pick up on something you said there you said how the gym would probably be the last thing you would do the last thing you would prioritise so would you say it's something else that comes along then that will instantly take priority over the gym so the gym will probably be on the last thing you will do so if you got what ever you had to do done then you would use the gym

SE: Yes it probably would be, because in a way, I suppose, you consider going in the gym doing some exercise a bit of a luxury in a way so in a way that's why it's all about planning to go and do something because otherwise there's always something that will crop up that will take presence over going and doing some exercise erm and it's also making sure you have the time to go and do the exercise whether it's going to the gym or going for a walk you know going for a walk can be an hour, an hour and a half or whatever so you have got to make sure you can err plan the time to go and do that

JE: Umm, okay. Ermm what do you feel now would help increase your current activity levels so do you think for example a personal trainer or a gym buddy to go with or family, what do you think would increase that?

SE: I think as I said before I think pre-planning what your doing so having, having a diary for sort of, for the coming week so that you can try and put time to one side, ermm, doing exercise I mean I do enjoy walking so I mean I will go walking with my wife quite a bit and I do enjoy that that's quite nice especially when it's light nights and

the weathers nice so it is nice to get out. Gym buddies? I don't think that would make much of a difference really, maybe sort of getting back into playing racquetball that would be quite good because that's a competitive game which is good

JE: Okay thank you, what is it in particular you don't enjoy about exercising?

SE: Ermm, what don't I enjoy, I wouldn't say necessarily there was something I don't enjoy I think it's more the mindset of encouraging yourself to go and do something rather than not enjoying it because once I do it I know I enjoy it afterwards I know I've enjoyed it so it's not the fact I'm not going to enjoy it because I would only do a form of exercise that I would enjoy which is either walking, going on the cross trainer, maybe playing racquetball and cycling, I keep meaning to get myself into cycling I got myself a decent bike there but again it's putting aside time to go and do that but I would enjoy that so it's not that I don't enjoy doing the exercise it's more being lazy in the sense of not planning and actually putting your thoughts into an effort of doing it

JE: So you would say it's important to try and change for you it's to try and change your behaviour prior to exercise because that's the one thing now your trying to

SE: Yeah I think for me it's purely psychologically, to say, to pre-plan what I'm going to do because it's all very well saying "ohh I might go and have a walk tonight or I might go and do this" but I think you have to plan it and put it into your schedule if your busy to say "between 6 & 8 I'm going to go for a walk" and either speak to the wife and arrange to go for a walk with her or go on the walker in the garden or the cross trainer, so for me it's psychological in the sense I think I have to pre-plan what I'm doing.

JE: Yeah, okay last couple of questions going to go back to your barriers you identified on the questionnaire prior to this interview, in the questionnaire you mentioned that currently the barriers, personally that there's work commitments and home renovation

JE: And also you identified pain so could you maybe talk a little bit in depth or detail just err for the benefit of myself to understand of how this is a barrier

SE: Well at the moment work commitments, okay that's a lot of time because I'm trying to start my own business up which takes a lot of my time up, erm the house renovations is what probably causes the pain in a sense because I haven't been sort of physically active doing work on the house for a long time whereas now I'm on my hands and knees you know taking the floors up ermm the walls coming down ermm all that your using muscles that you probably haven't used before you know swinging a hammer for 4, 5, 6 hours a day makes your arms ache ermm I'm not as fit as I was for doing jobs so I do tend to find now that if I have been on my hands and knees lifting the flooring up my back starts to ache more ermm my arms ache and takes a little bit longer to recover so certainly whilst that has been ongoing that has been a barrier because in a way I've been in pain because of what I have been doing but then I do feel that that has been a form of exercise what I have been doing because if my muscles are aching then I must be doing them some good as well because I'm using muscles I haven't used.

JE: Do you think if you did a bit more physical activity that would put you in a bit of a better shape to do the housework?

SE: Well yes because if I did a bit more activity I'd lose a bit of weight as well my limbs would be a bit more supple really so yes that would help yeah

JE: Okay, another barrier that you mentioned was bad weather conditions, so again could you explain to me just a little more in detail

SE: Bad weather well I've put that because I do enjoy going for a walk so I will go for walks but I don't want to go walking in the rain or the ice and the rest of it so that does have a bit of an impact because if it's raining and the weather isn't good and it's dark nights then you know you don't particularly want to go walking anywhere so that does have an impact when the weather's nice and you've got light nights then you are more prone to make an effort you know get off your backside and go for a walk you know rather than sitting in front of the TV through the winter months or something so that's why I put bad weather for walking really.

JE: Yeah okay and the last sort of barrier you did put was family demands so again if you don't mind going into a bit more detail.

SE: Well family demands, more to do with erm the mother & father in law I suppose I spend a lot of time doing there, they're not in the best of health so I do quite a bit for them, doing the garden, cutting the grass, doing work around the house, erm taking them different places taking them hospital appointments and such like that does have an impact on your time that does reduce the free time you have to do something else you know but you can't really get away from family commitments so it's a matter of you know again tying those sort of things in but you don't know how they are from day to day so some days they may be really good and other days you weren't planning to go there but you have to go there so it's having to work around that

JE: Okay so one final question you mentioned a lot about pre-planning do you think if you were able to sort of plan a week in advance or a week of possible areas of where you could be active do you think that would encourage you to be more physically active or do you feel you would do more exercise if you were able to plan

SE: I think it would yeah I think if you, you know taking family commitments to one side I think if you can plan where you think you have the time to do some exercise and make a note of that either in a diary or on a piece of paper on the fridge or something to remind you that's what you're going to do so when you go to bed the night before you are aware that you're going to do between these hours of exercise you're going to do this that or the other then other than emergency you should be able to go and do that so instead of just leaving it as an ad-hoc basis thinking I might go and do it actually put it in a planner to say this is what I'm going to do I'm going to go and make an effort erm and I suppose at that point yeah, yeah I suppose it would help to have not a gym buddy but someone who is in a position to check what you are doing help you if need be and stuff like that

JE: You think it would help change your behaviour?

SE: Yeah I think it would change my behaviour I'm 54 now and that's something I haven't tried so all the other things I have tried although they work short term erm they haven't lasted so I think maybe that's a way of trying to say well overall if you've got your own business or you're doing some house renovations or whatever you know put an

hour to one side and either do it before anything else first thing in the morning and maybe give that a go yeah

JE: Okay, well thank you very much for that that concludes the interview what will happen now is I will type up what you just said

SE: Okay

JE: And ermm like I said it will be under password protection no-one else will read it and if anything is to be published obviously I will get your written consent as well so thank you very much for your time

SE: No problem thank you

Interview 2

Welcome back Father to the 2nd interview process, firstly, congratulations on completing the intervention and getting over that first hurdle. Similarly to the 1st interview, I will ask you a series of questions, this time based on the intervention and I would ask that you answer them as honestly as possible. I will also ask questions about specific activities/moments/incidents throughout the intervention that may have come to my attention, as well as talking through your diary that you kept. I will also ask you again to pick the stage that you feel you belong to on the TTM.

Transtheoretical Model (Biddle & Mutrie, 2008)

Please select the stage you feel you are currently in in relation to physical activity/sport or exercise

Precontemplation- I am currently not physically active and have no intention of doing so in the near future.

Contemplation- I am not currently active either, however have an intention to start in the near future.

Preparation- I am currently exercising some but not regularly, however plan to take action within the next month to exercise more.

Action- I am currently active, however have only recently started so am still at a high risk of relapse.

Maintenance- I am currently regularly physically active and have been for some time, at least six months.

Interview Questions

- 1) How did you find the intervention overall?
- 2) Do you feel it was beneficial to you in any way? Please explain why
- 3) How do you feel now that it is over?
- 4) What did you enjoy?
- 5) What did you not enjoy?

We'll now move onto the diaries we both kept as I would like to ask you a few questions on that

- 1) Day 3, the first game of racquetball, which I won, you mentioned it was harder than you thought and it made you realise how unfit you were. How did this make you feel?
- 2) Day 4, you mentioned other worries on your mind, you mentioned the flooring and of course the situation with a member of the family who is unwell, how did that affect you and how did you tackle that despite still completing the exercise?
- 3) Were you tempted to skip the exercise?
- 4) The gym session, you mentioned it was out of your comfort zone and you were less enthusiastic than with other activities, yet you still carried on and did the session. How did this experience make you feel compared to other exercises?
- 5) The final game of Racquetball you appeared to me to be in a great mood, I noticed that you played a lot better, better shots and you even mentioned that

you felt you had more energy. How did this session make you feel about yourself?

- 6) In the first interview, you mentioned how you often ached after doing housework, has this reduced in the 2 weeks since you have exercised
- 7) What will you try to do to continue exercising now?

Interview 2 Transcripts

Okay, welcome back to the 2nd interview Father in this process, firstly congratulations on completing the intervention and getting over that first hurdle. Similarly to the 1st interview I'll ask a series of questions this time based on the intervention and I would ask that you answer them as honestly as possible like you did in the first interview. I will also ask about specific activities/moments or incidents that occurred throughout the intervention that may have come to my attention as well as talking with you about your diary that you kept as well. However I'm just going to ask you if you could pick which stage you feel that you are currently in on the Transtheoretical Model like you did for the first interview.

SE: Okay, ermm, I would say I am currently at the 'action' stage.

JE: Thank you, so after the intervention which we finished 2 days ago you would say you were currently active however only recently started so you are still at a high risk of relapse?

SE: Yes that's correct

JE: Okay, so, the intervention finished 2 days ago the first question is how did you find the intervention overall?

SE: Very enjoyable, been lucky because the weather's been good, so I wanted to do something that I would enjoy hence walking and such like and it was a bonus because the weather was nice so it has been a good 2 weeks.

JE: You mentioned there about doing things you enjoy do you think with us doing activities that you enjoy do you think that helped towards it being a good intervention?

SE: Massively, I think if I was doing activities that I didn't enjoy then it would have been a lot harder to maintain the activity over a 2 week period so with doing activities that I was happy to do and wanted to do that's a massive hurdle that you get over because you are doing something you want to do

JE: Okay thanks. Do you feel that the intervention was beneficial to you in any way and if so why?

SE: Yes it was beneficial I think for a number of reasons. One reason I spent some quality time with my son, which is good, because it was set over a 2 week period we were able to plan what we were doing in that 2 week period, which again was good so if anything cropped up we'd make plans, we'd arrange what we were going to do, roughly what time we would be doing it, which meant I could plan other things around doing the intervention for the 2 weeks so I think the intervention was very successful and enjoyable.

JE: How do you feel now that it is over?

SE: I feel like I've achieved something quite good really because I'd let myself go and doing this for 2 weeks has got me back into the mood of doing things. Don't get me wrong it has helped because the weather has been good, but 2 weeks has been quite a good period of time to motivate and keep myself going in doing it so I feel good I'm

glad I done it, I feel a bit healthier in myself, I've lost weight, so there's been some good advantages to doing it.

JE: What did you enjoy about the intervention?

SE: Well I enjoyed spending time with you, certainly walking we'd walk for an hour stuff like that, that's been good and I've enjoyed playing racquetball because I hadn't played racquetball for quite a long time so that was quite good getting back into that, even though you beat me, but that was good to be honest with you because it made it more of a challenge playing the game because obviously you were playing well and it made me from the very outset put all my efforts into playing so that was good as well. So there's been nothing negative about it I've just overall enjoyed it and I've enjoyed what we've done which is what I wanted to go and do which is obviously walking, playing racquetball, okay we went in the gym once which maybe I didn't enjoy as much but overall that was the only thing I particularly didn't enjoy but again I'm glad I did it and it was worth doing.

JE: Well that's the next question, what did you not enjoy?

SE: Oh right, well out of everything the only thing I would say I didn't particularly enjoy, as much as the other things, was going in the gym, that probably was because it was pretty warm on the day I went in the gym. I find gym work, unless you've got something to take your mind off of what your doing i.e. a television to watch or you've got your headphones in listening to some music I think gym can become a bit repetitive and although I only did the rower for 15 minutes and I went on the bike for 15 minutes, and 15 minutes is not a great deal of time, but actually when your sitting on the rower for 15 minutes with nothing to look at it does become a bit unenjoyable I suppose. So out of everything I did for the 2 weeks that probably was the least enjoyable but I'm glad I did it, it was worth doing it and it just highlights the fact that if I'm going to do anything in the gym I need to have something to watch you know I need something to take my mind off of what your actually doing instead of just sitting there thinking 'I'm cycling here to nowhere' you know and your looking at a blank wall so that probably was the downside and the least enjoyable.

JE: Okay I'm going to move on now to the diaries that we both kept because obviously as you know I kept an observational diary and you did a diary of yourself as well of how you felt before, during and after exercise, so the first day I'm going to talk about is day 3, which was the first game of racquetball we played which I won, you mentioned that when we were playing that it was harder than you thought and made you realise just how unfit you were. So when I was asking you that and it was a sort of realisation how did that make you feel?

SE: I suppose in a way I was disappointed that I'd let my fitness level maybe drop as much as I had done without realising because obviously as I've said I used to play racquetball very regularly and very competitively so to be in a situation and having my first game with you who hasn't played racquetball much at all and to be given a run around and be out of breath and be struggling to chase a ball around brought it home to me probably how out of condition I have got myself so that was a bit of a disappointment in a way but then that was good because it made me think go on you need to do something about it.

JE: Do you, when you say disappointed did it make you not want to exercise or did it make you more driven to do exercise?

SE: It made me more determined to exercise because it's probably the one thing, let me think, it probably is the best thing I can judge on my fitness going down hill probably because I can compare 8:21 to how I would have been maybe when I played 6-8 months ago when I was playing compared to when I was playing the first game with you. So I can compare how I should have been to actually how I was on that day we played

JE: Okay, day 4, so the day after, you mentioned other worries on your mind in the diary, how beforehand you had other things to think about you also mentioned the first interview that family life, things like that often make exercise take a back seat but obviously this intervention you couldn't really do that, you had to take part, you mentioned the flooring was a problem and of course there was a situation with a family member who is unwell so how did that affect you and how did you react to still having to do the exercise, so how did you tackle that?

SE: Because it was pre-planned, yes okay because I'm obviously doing a lot of renovations in the house and we had a few issues with the floor well that is obviously on my mind but it didn't stop me doing what we planned because we had planned to go and do it and yes obviously with the poor prognosis of a close family member that had a bit of an adverse effect, but again because we had pre-planned what we were doing part of that plan was going to visit the person who wasn't well so in that sense that's quite good because we had already pre-planned we would go walking this that and the other we could tie the walk in to walking to where the relative lives to go and see them so that was quite good really and again it is down to pre-planning knowing that because we had planned to go and do it it is easier to keep that plan going rather than not having a plan.

JE: Staying on this topic with other worries on your mind were you tempted to skip the exercise?

SE: No I wasn't no I wasn't tempted to skip the exercise because the exercise was only for an hour, an hour and a half or whatever so again because it was planned if you can't take an hour and hour and a half to go and do something then it's a bit poor really and as I say because we were able to integrate what we had planned into going to visit the person anyway that was handy so no I never thought about skipping the exercise because we'd agreed to go and do it and we'd planned to go and do it so there was the time and the space to go and do it

JE: Okay so you mentioned before about the gym session so I'm going to come onto that now, we only did 1 gym session because you mentioned in the first interview that that was something you'd steered away from quite a bit for a few different reasons. You mentioned in the diary it was out of your comfort zone and you were less enthusiastic compared to other activities however my an observational point of view, my perspective you still carried on and you still did the session, I didn't have to do much motivating so you seemed able to motivate yourself. But how did this experience make you feel compared to the other exercises?

SE: Less enjoyable, by far, and I don't know what the outcome would have been if that's the only exercise we were going to do for 2 weeks, if we had said all we would do is gym work for 2 weeks then, would I have stuck to it? I really don't know because it

would have been unenjoyable. So I'm glad we only did it on the one occasion and I'm glad that we stuck to what we said I would be happy to go and do but I'm glad we had a go at doing that in the gym, because again you need to have a go at it to see how you feel and it hasn't put me off it just reminded me that you need to be organised and, you know, either go to a gym where you can watch something on a TV screen and the very least you know have some music and some earphones to take your mind off what your doing. So it didn't put me off, but I'm glad we only did it on the one occasion.

JE: Would you say, before exercising, for example if we were to walk to the in-laws/nan and grandads, how was it different before walking to the in-laws than it was before going to the gym? Was your mindset a little bit different? How were you feeling before both?

SE: Ermmmm, I always look forward to going walking, I was always looking forward to that, again helped because the weather was nice and the walk is quite a nice walk to go and do so I so I was always looking forward to that, I wasn't looking forward to going to the gym and I had to push myself to go in the gym. So the difference is, yes the gym in some respects is a bit of a chore whereas walking I didn't consider that to be a chore I did consider that to be enjoyable and I look forward to that.

JE: Okay.....

*****At this point in the interview the batteries ran out in the dictaphone*****

JE: Okay, so I'm going to ask you that question again, with my new batteries, the final game of racquetball from an observational point of view, I noticed that you appeared to be in a great mood, I noticed that you played a lot better, you were playing better shots and you even mentioned in your own diary that you had more energy, so going back to the first game of racquetball where you realised how unfit you were, to now this, where you were feeling great, how did you feel that made, how much of an impact did that have on you in your mindset?

SE: I think, it's only been 2 weeks, but, 2 weeks can make a big difference because I've been more doing more exercise and try and be a bit fitter, I've also been eating a bit healthier because the two go hand in hand so, one encourages the other in a sense so for 2 weeks you know I've been eating healthier and been doing the exercise, I've lost weight which on our 3rd game of racquetball I did feel like I had more energy, I felt better, I didn't feel as out of breath as what I did in the first or even the second game, I'd lost weight, I felt a lot fitter round court and I enjoyed it a lot better and I felt far better playing that 3rd game than what I did in the first game, so it was good I felt a lot healthier, a lot fitter, even though it was a matter of a 2 week period.

JE: A question that has come to my mind is that throughout some of the walks we did in your diary you said it was nice to be sat having a coffee, for example in Cheshire Oaks, do you think that makes you motivated a bit more if there's something at the end, so if you can have a sit down and a coffee or there's something at the end of it, do you think that will help you do exercise more if there's something in there, sort of a reward at the end of it?

SE: Yeah I think it's human nature in some respects that if you want to encourage yourself to go and do something it does help at the end of what your doing that there's something that makes it worthwhile so, yeah hence walking down to Cheshire Oaks, which is an hours walk it was nice then to be in a position to go in and have a coffee and sit outside and have a bit of a chill. The same way if we walked to the relatives you know, a couple of times we walked there we stopped and we had a tea or a coffee and a chinwag and then we'd walk all the way back again so it is nice then because your doing something and you know what your going to get at the end of the exercise you are doing , it does help yeah

JE: Okay, in the first interview, you mentioned how, with the house renovations, you mentioned how you had been aching a bit because your sometimes not using the muscles regularly, has this acheiness reduced in the 2 weeks of the intervention, do you feel any different?

SE: Yes I do feel different because along with acheiness is being overweight and being out of condition, so because we did a bit of variety of exercise, it helps you loosen your limbs up and loosen your joints and such like so that does have a knock on effect with your day-to-day lifestyle, so if I'm doing work on the house or doing whatever it has been a bit easier because you do feel you're a bit loosened up than what you would have been so that has helped yeah.

JE: Coming onto the final question, you mentioned about pre-planning and having something at the end, having a coffee or others things that have helped you over the past couple of weeks. What will you try to do now to try to continue exercising through these next 4 weeks where I will take a step back as your fitness instructor, what will you take from this intervention to help you continue exercising?

SE: Well, pre-planning, certainly looking at what's coming up in the forthcoming week, to plan in that upcoming week whatever exercise I'm going to do, planning to, you know if I'm going to go walk down Cheshire Oaks I'll be walking down to meet Anne from work if she's working lates I'll half an hour earlier to give myself half an hour to go and sit and have a cup of coffee because again that's something to encourage myself, so really, exactly what we've done over the last 2 weeks is what I want to try and do over the next four weeks, make sure I put a bit of time to one side on the set days I'm going to do something, look at the weather forecast in advance a bit as well to try and plan when I can go and do any exercise that I want to go and do, whether that be sort of walking, playing racquetball and even maybe getting on a cross trainer in the house sort of thing as well maybe try and use that, so again it's just a matter of pre-planning and making the effort to say 'yes I am going to go and do it' so yeah, what we've done over the past 2 weeks I'll be trying to do exactly the same but on my own

JE: Okay so what's going to happen now is obviously as your fitness instructor I will take a step back and won't be planning anything for you obviously I'll still be there as your son obviously if you want to go out and do anything but obviously this is now going to be down to you basically. So well done on completing the intervention and we will have another interview in 4 weeks time and see how you got on on your own, so best of luck

SE: Okay thank you

Interview 3

Hello Dad, welcome back to the 3rd and final interview in this study. For the past 4 weeks you have independently attempted to continue on from the physical activity intervention, however without the help of myself as a fitness instructor. You have completed your diaries as required which I have looked over, and during this 4 weeks we have had contact in the usual father/son relationship that we had prior to this study. This interview is to understand how the past 4 weeks have been for you and for you to express the highs and lows. Are you ready to continue?

I'll ask you to pick which stage you feel you are in in the TTM. And why do you think this?

Transtheoretical Model (Biddle & Mutrie, 2008)

Please select the stage you feel you are currently in in relation to physical activity/sport or exercise

Precontemplation- I am currently not physically active and have no intention of doing so in the near future.

Contemplation- I am not currently active either, however have an intention to start in the near future.

Preparation- I am currently exercising some but not regularly, however plan to take action within the next month to exercise more.

Action- I am currently active, however have only recently started so am still at a high risk of relapse.

Maintenance- I am currently regularly physically active and have been for some time, at least six months.

- 1) Overall, how did you think the past 4 weeks went and are you happy with what you completed?
- 2) The GLTEQ scores from week 1-4 were 27, 18, 18, 27. An increase on your baseline 15. However what influenced lower scores in the 2nd and 3rd weeks?
- 3) Were there any incidents that affected your physical activity levels in the past 4 weeks?
- 4) You told me your weight the morning after the independent 4 weeks concluded, and unfortunately you had put on 5 pounds of weight. How did this make you feel?
- 5) How do you think you could have avoided this, in terms of physical activity completed?
- 6) Was it harder to motivate yourself as there was no fitness instructor? If so why?
- 7) Would it be fair to say that you didn't push yourself to complete any 'high intensity' activities?
- 8) This study was aiming to increase your physical activity levels, would you say this was achieved?
- 9) Overall was the study, to you, a success? Explain please
- 10) Is there anything you would like to add?

Interview 3 Transcripts

Hello, Dad, welcome back to the 3rd and final interview in this study. For the past four weeks you have independently attempted to continue on from the physical activity intervention, however without the help of myself as a fitness instructor. You have completed your diaries as required, which I have looked over and during this four weeks we have had the usual contact of father and son relationship that we had prior to this study. This interview is to understand how the past four weeks have been for you and for you to express the highs and lows. Are you ready to continue?

SE: Yes, fine yeah.

JE: Okay great. Okay like the previous two interviews I will ask you which stage you feel you are in in the transtheoretical model and why do you think this?

SE: I would say currently I'm at the preparation level

JE: And why would you say that?

SE: I think over the last four weeks I've not exercised as much as I had done when we had the intervention, partly because as well as being away, you know I've been away for a long weekend, well in fact I've been away for two long weekends within that four week period and it is harder to motivate yourself when your on your own to go and do something and I've had nobody to go and play racquetball with so yeah it has been harder and I have done less in the four weeks than I was doing with two weeks with yourself

JE: Okay thank you. Okay so overall how do you think the past four weeks went and are you happy with what you completed?

SE: I'm partly happy with the four weeks because I think I've achieved more in the four weeks than what I did do prior to the intervention period. I think it's helped me understand and encourage me to do a bit more it's been difficult because the four week period as I say did combine with two long weekends of being away which did impact on me doing exercise because I've had no-one to play racquetball with I've not been able to play racquetball, I haven't used the gym so my exercise in the four weeks has only purely been walking which obviously isn't as hard as having a game of racquetball or going in the gym but after saying that the four weeks has been better than what I would have done if I hadn't have had the intervention, I do think I've walked more and done more exercise.

JE: Good. So the GLTEQ scores which was when I calculated the physical activity you did do and it gives you an average score, for the four weeks, from week one to four were 27, 18, 18 and 27 again which were increases on your baseline week of 15 so however what influenced lower scores in the second and third weeks where you got only 18?

SE: The second and third weeks will be the weeks where I have been away for the long weekends so I went away on the early Friday, yeah on both weekends I was away early Friday and didn't come back home until the Monday so that did impact because really there was four days where I wasn't particularly doing any exercise okay I may have done a bit of walking when I was in the Isle of Man and as such like but nowhere near to the same extent as I would have done when I was at home, so I think those, the

second and third weeks have been impacted more in the sense of being away and also I think the weather as well I think the weather took a bit of a turn for the worse as well certainly in the third week which did impact going out walking.

JE: Okay thank you. Were there any incidents that affected your physical activity levels I know you just mentioned weather and obviously you have also said that a lot of it is walking which going back to the start of the study you mentioned weather does impact on whether you do physical activity because you do a lot of walking so were there incidents like that and were there many incidents or were there different ones?

SE: I think the only thing that has impacted probably is the weather, I can't think of anything else in the last four weeks that has had an impact or restricted me from doing something other than the weather so no I think it's just the fact of going away for two long weekends that did cause problems I suppose and the weather because you are only walking outside your more limited as to whether you can if the weather is good or not

JE: Okay. You told me obviously throughout this study we've monitored your weight, you told me your weight the morning after the independent four weeks concluded, unfortunately you had put on five pounds in the four weeks so how did this make you feel? Because you said you were partly happy with doing a lot of walking but how did it feel when you noticed you had put on five pounds of weight?

SE: In some ways I wasn't surprised, again going away, you know I mean I haven't done anywhere near as much exercise as what I did do in the two week intervention in the sense of playing racquetball because obviously that's far more strenuous and also in that two week intervention period I didn't go away and I wasn't doing anything else really whereas over this four week period it's a longer period of time to either not do anything except your exercise so over this four week period of time I've been away for two long weekends which has resulted in drinking more alcohol, eating more food and certainly at 'Carfest' Oulton Park eating more junk food and again plenty of drinking alcohol which will make me put weight on and also I'll have been out for a few meals as well in the last four week period and I suppose that culminated in not doing as much strenuous exercise I will put weight on. But then if I break that down to over a four week period it's just over a pound a week, I know where I've probably gone wrong, I know why that's happened and I don't go away for long weekends all the time so in one way maybe I was disappointed but then I can understand why so I wasn't overly concerned

JE: It wasn't de-motivating?

SE: No it hasn't de-motivated me no, I think if anything it's probably motivated me more to get back to normality again really and try and be good I suppose.

JE: Okay. How do you think, putting the five pounds of weight on could have been avoided in terms of physical activity, when you think of the physical activity you did do how do you think it could have been avoided?

SE: I think I would have had to of done more activity and maybe more intense activity. You know either going into the gym, playing racquetball or maybe even thinking of another activity you know I keep meaning to get my push bike out and go cycling so I'm doing another sort of activity as well because I do understand the sort of walking, although I do push myself to go walking, so I don't just dawdle I do walk at a good

speed I think your body can just get used to just one type of exercise as well so I just needed to vary it a bit maybe.

JE: Do you think you should have maybe pushed yourself a bit more to tire yourself out a bit?

SE: Yes I do and I think, I think it's easier to do that if you go into a gym on a cross trainer or a walker it's easier to make yourself more tired because your in that situation to sweat whereas if you are walking along the street you don't really want to be sweaty buckets and then if your wanting to go and have a coffee in Costa at the end of it so yeah it is yeah.

JE: Was it harder to motivate yourself to do physical activity, you know I wasn't there as a fitness instructor, so was that harder for you?

SE: A lot harder yeah, it is harder. I don't think you can get away from it being anything other than being harder. If you get on, if you are getting on with somebody that you are doing some fitness with then that makes the exercise far more enjoyable and if you, it is easier to push yourself harder and motivate yourself if you are with somebody else because that other person can encourage you to go and push yourself and to go and work harder so it's far easier and I think you get better results by doing something with somebody else it might not be for everyone but certainly for myself I think it was, I enjoyed it far more for the two weeks intervention than what I did do for the last four weeks.

JE: Okay. Question here which I think I have already covered and you answered 'would it be fair to say that you didn't push yourself to complete any high intensity activities?' but you've mentioned there was no-one to play racquetball with so you would agree with that?

SE: Yeah

JE: So I think overall this study was aiming to increase your physical activity levels, obviously we mentioned your weight but overall this study was just about physical activity levels, so would you say that this was achieved?

SE: I do think it's been achieved yeah I think if we go back to the very first week where I kept a record of what I was doing and then compare that to the two week intervention and the four weeks on my own I think there is an improvement and I think it does help because it highlights in that first week how little I was doing to what you can actually do with not too much more effort, I know that the baseline was 15 okay so even in this four week period the lowest was still 18 so it's still an improvement it's not as if I've gone below that baseline in the four weeks each week has been an improvement

JE: Did the intervention help you, sort of understand maybe where you could do a bit of exercise or physical activity so you know we walked to Nan & Grandads so did that make you understand that doing little things like that, instead of driving...

SE: Yeah that did help and it also helped because the intervention had planning to go and do something rather than leaving it until the last minute or not planning it, it's important to actually plan what you actually doing in the week and try and stick to that plan which is what we did in the intervention and that's worked well for the last four weeks as well.

JE: Okay. So overall was this study to you a success?

SE: Yes, I think it's been a success. I think I'm doing more exercise now than what I was doing so no I think it was a success yeah

JE: Okay and is there anything else you would like to add?

SE: No, I think the only thing I would say is for myself if you can do exercise with somebody that you get on with, I think that is a massive bonus which I think would be the same for anybody where if you can exercise with somebody you get on with doing the exercise your comfortable with and happy with that has got to be a massive improvement because it helps you motivate yourself, so it's good

JE: Okay thank you. Well I'm pleased to tell you that this is the end of your involvement in the study.

SE: Wow.

JE: I know it's been quite a long summer so I want to thank you very much for making free time for the intervention and keeping the diaries, doing the interviews. What will happen now is I will go away type this up, do a discussion, continue with the work type it all up and I will send you a copy of it before it is printed for your consent

SE: Okay

JE: And that's it then so thank you very much, cheers

SE: Cheers, thank you.

Appendix B- Diary logs and observations made throughout the study completed my Father and I

GLTEQ Calculation- 9x how many times high, 6x how many times moderate, 3x how many times low (Godin & Shephard, 1997)

Baseline Week:

Day 1 (Sunday)

No exercise, however cleaned out the garage from 9am-6pm so was physically active

GLTEQ- Light

Day 2 (Monday)

No exercise however cut the grass, continued to clean out the garage, which required lots of lifting so again, some physical activity

GLTEQ- Light

Day 3 (Tuesday)

Went to New Brighton with Wife then walked for an hour, medium/low intensity

Enjoyed it, nice walk with the wife, nice to go out and get fresh air after working in the garage the previous 2 days

GLTEQ- Moderate

Day 4 (Wednesday)

No exercise

Day 5 (Thursday)

No exercise

Day 6 (Friday)

No exercise

Day 7 (Saturday)

No exercise however spent all day getting wooden floor up so small physical activity

GLTEQ- Light

GLTEQ Weekly Score- 9+6=15

Intervention Diaries

Week 1 Day 1 (Thursday)

Activity: Walk to the 'in-laws' 2.5miles

Duration: 45 mins

GLTEQ- Moderate

Feelings before Exercise: Feeling tired and achey, but looking forward to it because it's a nice relaxing walk so therefore makes it enjoyable for me.

Feelings during Exercise: Enjoying it because I get to spend time with my son and have a talk, although sweaty and tired still.

Feelings after Exercise: Feeling good and happy that it is complete, I feel tired and aching a bit but I enjoyed the walk and the weather was nice. Feels good to have done some exercise.

Week 1 Day 2 (Saturday)

Activity: Walk to the 'in-laws' / 2.5miles

Duration: 45 mins

GLTEQ- Moderate

Feelings before Exercise: Nice to get out from the jobs I have been doing today, happy because of the nice weather, so therefore I'm in a pretty good mood, and feel I have good attitude towards walking plus I'm not tired today.

Feelings during Exercise: Enjoying it because of the weather, nice to spend time with son again, still not feeling tired and I feel good to be doing some more exercise.

Feelings after Exercise: Feel good in myself, happy because I've done a good bit of exercise, happy because the weather was good and was not feeling tired. Overall happy with the exercise.

Week 1 Day 3 (Sunday)

Activity: Racquetball

Duration: 45 mins

GLTEQ- High

Feelings before Exercise: I'm really looking forward to it, excited to play racquetball because it's the first time this year (7/8 months) that I have played, also looking forward to the competitiveness and how it is a bit different to other activities.

Feelings during Exercise: Harder than I thought! But in a good way I suppose because it means I'm working hard on the court. First 20 minutes is tough because it made me realise how unfit I am, but I also feel that this is good because it makes me realise exactly how out of condition I am.

Feelings after Exercise: I'm feeling tired and I'm aching, but enjoyed it overall and it feels good to play racquetball again and have a workout of that magnitude. Feels good because I got a good sweat on so it feels like it has done me some good.

Week 1 Day 4 (Monday)

Activity: Walk to Cheshire Oaks / 5 Miles

Duration: 60 mins

GLTEQ- Moderate

Feelings before Exercise: Bit rushed today as other problems occurred such as house renovations, so feeling tired because I have been worrying about the house so that is on my mind, probably less excited than other activities so far which I would put down to issues on my mind.

Feelings during Exercise: Very tired, aching from yesterday, sweaty, not as enjoyable because I have other things that are currently on my mind, plus I have things to do when I get in now to do with the house, but I am determined to make an effort and follow through with the plan of exercise.

Feelings after Exercise: Very tired, hot, sweaty but very happy it's done, looking back I would say it was definitely not as enjoyable as other things because of other things on my mind, other worries such as the house and family. Happy now to be sat down having a coffee in Cheshire Oaks, I do feel I wouldn't have done it if this was not part of an intervention.

Week 1 Day 5 (Wednesday)

Activity: Walk to 'in laws' and walk back / 5 miles

Duration: 1 hour 30 minutes

GLTEQ- Moderate

Feelings before Exercise: Feeling rushed again today because there are things to do with the flooring in the house that I need to get back to do, so exercise needs to be done now. But looking forward to it because it's nice weather so looking forward to getting out in it and take advantage of it. Also good to be doing it now get the exercise done now because other jobs to do later.

Feelings during Exercise: Feeling OK, glad we planned it in before doing house work, happy to do it and enjoying the good weather, not feeling tired today either which is a bonus.

Feelings after Exercise: Feeling good and feels like the nice weather helped that, I feel in a good mood now for the rest of the day now and glad that it is completed so I can concentrate on the jobs to do in the afternoon.

Week 1 Day 6 (Thursday)

Activity: Racquetball

Duration: 45 minutes

GLTEQ- High

Feelings before Exercise: Looking forward to it because the last time I played it was a good, close, competitive game. I really wants to play as well, plus I am happy to get it done early again because of painting to do later on.

Feelings during Exercise: Feeling good because I am not as tired as I was the first time I played in, so feeling the benefit and that gives me a confidence boost and makes me feel good about myself. I also feel like I have more energy than the last game and definitely enjoying it.

Feelings after Exercise: Feels very good because I am not tired or aching and feel that I am benefiting from the last time I played now that I am exercising again, feel more positive about playing now as I feel my fitness is a bit better.

GLTEQ Weekly Score 24+18=42

Week 2 Day 1 (Friday)

Activity: Walk to 'in laws' and back home/ 5 miles

Duration: 1 hour 30 minutes

GLTEQ- Moderate

Feelings before Exercise: Feeling positive because I worked hard this morning on the house so it feels good to have done some house work and now I can do some leisure-time activity. So looking forward to it, get a nice walk and chill out a bit.

Feelings during Exercise: I'm feeling hot and sweaty, my leg is aching from racquetball yesterday but feeling alright in general, enjoying it again because of the weather.

Feelings after Exercise: Feeling tired now because the weather was very hot, but I'm happy to have completed it and to be home with my feet up. Pleased to have done a bit further as well as opposed to just walking to the in-laws the previous week. Nice to have a break in-between walking so I could have a coffee.

Week 2 Day 2 (Saturday)

Activity: Gym session (bike & rower)

Duration: 30 minutes

GLTEQ: High

Feelings before Exercise: I am feeling tired and aching from the walk yesterday, bit tougher because it is a different environment and I am probably not as enthusiastic because it is out of my comfort zone.

Feelings during Exercise: Feeling a bit bored and I'm feeling out of my comfort zone but I am determined to get the exercise done. Feel if I were on my own I would need to try and motivate myself more because it is a boring activity.

Feelings after Exercise: I feel good, feel happy to have done it. Feels it was a lot warmer to exercise in with the gym being very warm. Happy to try something new for a change, I felt the exercises were to a good standard for me. I didn't feel it was as enjoyable as racquetball or walking however.

Week 2 Day 3 (Wednesday)

Activity: Walk to Nan & Grandad's and back home/ 5 miles

Duration: 1 hour 30 minutes

GLTEQ: Moderate

Feelings before Exercise: Apprehensive because of the weather not being great however I feel okay and looking forward to a walk after a few days off. Also apprehensive to see how my leg is feeling as it was very sore on the 2 days off.

Feelings during Exercise: Feeling okay, very warm and very muggy weather to walk in but enjoying it and nice to get fresh air and get out of the house after doing house work again.

Feelings after Exercise: Feeling good now it is done, enjoyed it and I am happy because my leg is no longer hurting like it was in the previous 2 days which I had off. Not too hot either and not aching so making me feel good as I also didn't sweat as much.

Week 2 Day 4 (Thursday)

Activity: Racquetball

Duration: 40 minutes

GLTEQ: High

Feelings before Exercise: I feel good today, feeling happy about playing but very hot. Looking forward to a game of racquetball and do not have any negatives to mention.

Feelings during Exercise: Feeling better during this game than I did in previous games, which is a confidence booster because I feel fitter and have more energy. This I feel leads to me playing better as I have more time to place shots because of improved fitness. Good hard workout so far.

Feelings after Exercise: Feel very good about myself, I really enjoyed the game, felt I had more energy and played better today. It feels better because I'm playing better which I think is down to better fitness and more energy and I'm not feeling too tired afterwards.

Week 2 Day 5 (Friday)

Activity: Walk to Cheshire Oaks/ 5 miles

Duration: 1 hour

GLTEQ: Moderate

Feelings before Exercise: Despite being very hot weather I'm feeling good and invigorated. Bit of a new lease of life because I feel good in myself which is a bit of a different feeling and I can start to feel a bit of a difference in my fitness

Feelings during Exercise: Feeling good, not feeling tired despite the weather and not feeling achey, looking forward to sitting down with a coffee afterwards because it means I will have completed the exercise. It feels good in myself because I can feel the benefits of exercising regularly.

Feelings after Exercise: Feel really good to be sat down having a coffee because it was an achievement and feel very productive and refreshed, plus I don't feel as tired as what I thought I would which again boosts my confidence.

GLTEQ Weekly Score 18+18=36

Intervention Observations

Week 1 Day 1 (Thursday)

Activity: Walk to the 'in-laws' 2.5miles

Duration: 45 mins

Intensity: Low/medium

Observations: Seemed eager to go for the walk, seemed happy throughout the exercise, good long conversation I feel kept him going as it takes mind off of the walking, no real motivation techniques needed. Sadly had some bad news about Grandad, but that didn't stop him, because we walked to visit so we had an excuse to visit to check up on him, but we walked and got the exercise in

Week 1 Day 2 (Saturday)

Activity: Walk to the 'in-laws' / 2.5miles

Duration: 45 mins

Intensity: Low/medium

Observations: Seemed happy to go for a walk, kept mentioning it when talking about what he needed to do e.g. 'then we'll walk to Nan's' which was good to hear. Nice weather made it better, again my Dad seemed very talkative and happy. Didn't really have to motivate him today

Week 1 Day 3 (Sunday)

Activity: Racquetball

Duration: 45 mins

Intensity: High

Observations: Was excited to play racquetball, throughout the day kept saying things like 'Ready to get whipped at Racquetball' mainly because this is his favourite sport and he hadn't played in a while. However I think when playing he realised how unfit he was, despite this we only were supposed to play 3 games but he decided he wanted to play 5, seemed eager to play on as much as he could, didn't environment from walking, seemed very happy afterwards and pleased to have worked hard, seemed to

acknowledge that a lot of sweating was attribute to a good hard workout. Despite him losing, he seemed happy because they were close games and he had worked hard.

Week 1 Day 4 (Monday)

Activity: Walk to Cheshire Oaks / 5 Miles

Duration: 60 mins

Intensity: Med/Low

Observations: Tough day today, throughout the day certain problems occurred with the house which had his mind occupied, seemed to be reluctant to complete the exercise however still persevered with it, looked very tired as well, partly because there was added stress and worry. Seemed very happy & chilled afterwards having a coffee, seemed slightly proud that it was done. Seemed happier after this day than other days, maybe because of how unmotivated he originally was. Mentioned he would not have done the exercise unless it was an intervention.

Week 1 Day 5 (Wednesday)

Activity: Walk to Nan & Grandads and back home / 5 miles

Duration: 1 hour 30 minutes

Intensity: Med/Low

Observations: Seemed happy to be walking in the good weather and having a good conversation, which helps pass the time. Didn't moan about being achey or tired which he has mentioned in previous activities. Was happy to get it done early and take advantage of nice weather and can now get on with the rest of his day, seems to be a weight off his mind

Week 1 Day 6 (Thursday)

Activity: Racquetball

Duration: 45 minutes

Intensity: High

Observations: Seemed in a good mood prior to the game, seemed excited. Throughout the game he looked in a very positive mood and explained he felt he had more energy and I think this helped towards his enjoyment more. Despite losing he seemed upbeat afterwards and was thrilled that he was not aching and tired so was pleased to get some good exercise done and not feel bad effects afterwards.

Week 2 Day 1 (Friday)

Activity: Walk to 'in-laws' and back home/ 5 miles

Duration: 1 hour 30 minutes

Intensity: Moderate

Observations: Appeared in a good mood prior to the exercise, was busy working on the house in the morning, seemed okay to walk there and back today. Enjoyed it because of

the weather which he kept mentioning. Did seem to get tired towards the end but was determined to carry on.

Week 2 Day 2 (Saturday)

Activity: Gym session (bike and rower)

Duration: 30 minutes

Intensity: High

Observations: Did not seem as excited for this activity, did mention it was out of his comfort zone but still maintained determined throughout, seemed bored at times because it is a tedious activity. Was pleased to complete it at the end but feel that this was his least favoured activity in the intervention so far.

Week 2 Day 3 (Wednesday)

Activity: Walk to Nan & Grandad's and back home

Duration: 1 hour 30 minutes

Intensity: Medium

Observations: Did not seem too impressed with the weather, however he appeared determined since he had a few days off. He complained during his few days off his leg was sore but was feeling better, still seemed anxious to see if it was fully healed though. Once we starting walking and his leg was not bothering him his mood did seem to change for the better. Did not seem as tired today either when walking.

Week 2 Day 4 (Thursday)

Activity: Racquetball

Duration: 40 minutes

Intensity: High

Observations: Definitely seemed a lot fitter today, whereas I had won the previous games due to better fitness, he got around the court a lot easier today, also did not seem as tired at the end. Looked very happy, not just because he won but because of the way he felt. Seemed to have more energy. Hoping this kind of feeling and difference he appreciates and remembers when attempting to continue exercise.

Week 2 Day 5 (Friday)

Activity: Walk to Cheshire Oaks/ 5 miles

Duration: 1 hour

GLTEQ: Moderate

Observations: Seems in a very good mood, perhaps down to the intervention almost being over. Was very happy to sit down at the end, mentioned it was an achievement for him to have participated and he once again did not seem as tired and sweaty throughout or at the end of the walk. Mentioned he felt the walk was not as hard for him.

Independent Activity Diaries

Week 1 Day 1 (Monday)

Activity: Walking and gardening

GLTEQ- Low

Feelings before Exercise: Good, feeling energetic, weather looks like it could be good also.

Feelings during Exercise: Good, although weather is very hot

Feelings after Exercise: Great, very enjoyable days exercise and the weather was a great benefit.

Week 1 Day 2 (Tuesday)

Activity: Walk to Cheshire Oaks

GLTEQ- Moderate

Feelings before Exercise: Tired after a busy day working on the house and the weather is very hot

Feelings during Exercise: Tired, very hot and sweaty. Hard work today because of the heat and humidity.

Feelings after Exercise: Tired, but very glad I perceived with the walk as planned

Week 1 Day 3 (Wednesday)

Activity: Walk to 'in laws' (new route)

GLTEQ- Moderate

Feelings before Exercise: Feeling good this morning, have planned to walk early because of the warm weather.

Feelings during Exercise: Feeling okay, taking a new route so it is taking a bit longer than expected but the weather is nice.

Feelings after Exercise: Good walk, took longer than expected, felt hot at the end but it was a nice route and a good achievement.

Week 1 Day 4 (Thursday)

Activity: Walk New Brighton Promenade

GLTEQ- Moderate

Feelings before Exercise: Feeling good, looking forward to a different walk with my wife, nice evening with the weather also.

Feelings during Exercise: Feel good, it's a nice evening, the weather is sunny but with a breeze which is perfect.

Feelings after Exercise: Feel good, it was a pleasant walk along the promenade and the weather was a big contribution to my enjoyment.

Week 1 Day 5 (Saturday)

Activity: Walk Isle of Man

GLTEQ- Moderate

Feelings before Exercise: Looking forward to the walk, we are away with some friends in the Isle of Man and there are loads of opportunities to walk and the weather is good so far

Feelings during Exercise: Really good, plenty of walking which is good

Feelings after Exercise: Great day, lots of walking at a good pace and in the good weather.

GLTEQ Weekly Score 27

Week 2 Day 1 (Tuesday)

Activity: Walk to Cheshire Oaks

GLTEQ- Moderate

Feelings before Exercise: Feeling tired today, didn't sleep very well, however planned to walk to meet my wife so going to persevere.

Feelings during Exercise: Feel okay, listening to music whilst walking so feel quite relaxed, not feeling as tired now.

Feelings after Exercise: Feel good, sat in Costa having a coffee, feel glad to have completed the walk even though I was initially tired.

Week 2 Day 2 (Wednesday)

Activity: Gardening

GLTEQ- Low

Feelings before Exercise: Feel okay today, need to catch up with the gardening, lots to do but feel okay.

Feelings during Exercise: Happy working in the garden, fresh air and decent weather.

Feelings after Exercise: Feel good, achieved what I set out to do and happy with the work done.

Week 1 Day 3 (Friday)

Activity: Walking around Carfest

GLTEQ- Low

Feelings before Exercise: Excited to go away with Jacob at Carfest, lots of walking involved.

Feelings during Exercise: Feel great, plenty of walking to do but weather not great, doesn't affect my enjoyment though.

Feelings after Exercise: Very happy with all the walking, not particularly big intensity however was a long time.

Week 1 Day 4 (Saturday)

Activity: Walking around Carfest

GLTEQ- Low

Feelings before Exercise: Again feeling good today, enjoying the festival so this helps, weather not too good however.

Feelings during Exercise: Highly enjoying the day, similar to yesterday in terms of activity, but still a good day.

Feelings after Exercise: A very good day of walking, feel pleased to have done a lot of walking, weather wasn't great but we still persevered.

Week 1 Day 5 (Sunday)

Activity: Walking around Carfest

GLTEQ- Low

Feelings before Exercise: Feel good today, weather looks better as well so far which will be good. Looking forward to another day walking.

Feelings during Exercise: Enjoying the walking, weather is a lot better.

Feelings after Exercise: Been a good day of walking again in glorious weather, had a great time.

GLTEQ Weekly Score 18

Week 3 Day 1 (Tuesday)

Activity: Walking in New Brighton

GLTEQ- Moderate

Feelings before Exercise: Feeling very happy today, looking forward to walking along the promenade, bit harder to motivate myself however due to the poor weather.

Feelings during Exercise: The weather isn't too bad so feeling good, noticing a bit of a difference when walking as not as tired or achy today.

Feelings after Exercise: Very happy, been a pleasant walk, had a coffee at the end, perhaps could have walked for longer. Weather was good.

Week 3 Day 2 (Thursday)

Activity: Walking to 'in-laws'

GLTEQ- Moderate

Feelings before Exercise: Weather is not very good but planned to walk so will continue, won't be as enjoyable however as the sun is not shining. Looking forward to the fresh air.

Feelings during Exercise: Feel okay, listening to music which passes the time away, not feeling tired either.

Feelings after Exercise: Feel good, good long walk and I do not feel tired which is a benefit.

Week 3 Day 3 (Friday)

Activity: Walking to Cheshire Oaks

GLTEQ- Moderate

Feelings before Exercise: Feel okay, weather is not great again so makes the thought of walking harder.

Feelings during Exercise: Feeling a bit tired, however listening to music so makes the walk easier.

Feelings after Exercise: Feel okay, took longer today not too sure why, I was feeling tired though. Weather didn't help.

GLTEQ Weekly Score 18

Week 4 Day 1 (Monday)

Activity: Walking to Cheshire Oaks

GLTEQ- Moderate

Feelings before Exercise: Feel okay today, been a busy day working on the house, back is feeling a bit sore though, but think the walk will do it some good.

Feelings during Exercise: Feel good, left earlier to I have time for a coffee and my back is not as achy as it was.

Feelings after Exercise: Feel very good, not tired and had time for a coffee. Back felt much better after the walk which helps my mood.

Week 4 Day 2 (Wednesday)

Activity: Walking in New Brighton

GLTEQ- Moderate

Feelings before Exercise: Feel good, busy day again working on the house however planned to go to New Brighton so will persevere.

Feelings during Exercise: Feel good, pleasant walk weather is not too bad either which helps.

Feelings after Exercise: Very happy, nice walk with a coffee and cake at the halfway point, weather was okay.

Week 4 Day 3 (Friday)

Activity: Walking to Cheshire Oaks

GLTEQ- Moderate

Feelings before Exercise: Feel really good, the house renovations are getting less, arranged to go on holiday so determined to do exercise now.

Feelings during Exercise: Feel good, not feeling tired, walked a different route so not to make the walk monotone.

Feelings after Exercise: Good, walk took longer because of new route but felt relaxed and didn't feel tired.

Week 4 Day 4 (Saturday)

Activity: Walking to 'in-laws'

GLTEQ- Moderate

Feelings before Exercise: Weather not bad today, feel quite rejuvenated and looking forward to the walk, not tired or achy.

Feelings during Exercise: Enjoyable walk, weather better than I expected which is helping, walking a different route which is more scenic so that his good.

Feelings after Exercise: Not tired or achy, more scenic route which I enjoyed a lot, very good walk in general.

Week 4 Day 5 (Sunday)

Activity: Gardening

GLTEQ- Low

Feelings before Exercise: Busy day today with lots to do but feeling very happy, just need to crack on with the gardening, weather seems okay.

Feelings during Exercise: Feel good, in a good mood, lots of gardening and other activity involving moving the paving slabs etc. Weather is good as well.

Feelings after Exercise: Feel okay, very happy to have done everything, back is slightly achy but pleased with everything done.

Independent Study Observations

Despite no longer being involved with my father from an ethnographic researcher or a fitness instructor perspective, I was still able to observe his actions throughout his independent study. However these observations were limited, as we are not residents in the same home and our usual contact is sporadic meetings in a café or back home the only observations made were when I was able to go home and stay for 1 or 2 nights.

Positives:

One night I was home, he did make the effort to walk down to Cheshire Oaks.

Was walking a lot on his own, either to relatives or into Cheshire Oaks.

Was interesting to see him say he wanted to take a different route to Nan & Grandads as it is a longer walk and more scenic. Therefore he would be walking for longer so this was encouraging.

Negatives:

One of the first days into the independent phase we took a trip to an antiques shop with Nan & Grandad which included picking them up, however, he decided to drive to Nan & Grandads instead of walk. He would have been able to walk as another family member could easily have followed in the car. I felt this was an opportunity missed, however restricted myself from offering this suggestion beforehand as I was no longer a fitness instructor, and as his merely his son, this is something prior to the study I would not have encouraged.

No attempt to play racquetball, I was home for only minimal days, however not once did my father ask to play racquetball.

Appendix C- Participation consent form with participation information sheet, as well as older adult barriers to participation questionnaire completed by my father

PARTICIPANT CONSENT FORM

Attempting to create behaviour change using an ethnographic approach: A family-based study

01/06/2014

Name of Researcher: ...Jacob Edwards.... (University of Chester)

Supervisor of Researcher: ...Kirstie Simpson.... (University of Chester)

Please initial box

1. I confirm that I have read and understand the information sheet dated for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without my care or legal rights being affected. ☐
3. I understand that sections of any of my comments, which shall be audio-recorded if I give my permission, may be looked at by responsible individuals from regulatory authorities where it is relevant to my taking part in research. I give permission for these individuals to use my comments in the ways stated on the accompanying 'Participant Information Sheet'. ☐
4. I agree to take part in the above study. ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent (if different from researcher)	Date	Signature
_____	_____	_____
Researcher	Date	Signature

Participant Information Sheet

Attempting to create behaviour change using an ethnographic approach: A family-based study

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

What is the purpose of the study?

Using a recently retired family member, attempting to create behaviour change towards physical activity using a 2 week physical activity intervention. Firstly identifying any previous attempts the participant has tried at changing behaviour and understanding their barriers to activity using questionnaire and interviews. Then from this creating an intervention that the researcher and participant will agree on. Furthermore a diary will be kept of current activity (baseline) before the intervention, then a diary will be kept throughout the 2 week intervention on feelings towards exercise and further information about the activities undertaken. Once the intervention has concluded, the participant will be asked to keep a further diary for the following 5 weeks without an intervention or the researcher as the personal trainer. From this information the researcher will attempt to analyse any increase or decrease in physical activity and will gain greater understanding from this by completing a final interview using similar interview questions to find any differences in feelings towards exercise in general.

Why have I been chosen?

You have been chosen because you are a recently retired family member, therefore your current status is a perfect fit for this study. Also because of the regular contact with the researcher this will benefit the study as the intervention will be a 2 week intervention, but also an ethnographic study which requires the researcher to be involved with the participant in the everyday life

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your rights in any way.

What will happen to me if I take part?

If you decide to take part, you will be given this information sheet to keep and asked to sign the consent form.

This is an ethnographic study, so therefore the 2 week intervention will require the researcher to be involved in your day-to-day life for 2 weeks, incorporating a 2 week physical activity intervention into your life. However prior to the intervention you will be asked to keep a diary of your current physical activity being undertaken, this will be

known as the 'baseline' which would represent a normal week of activity for yourself. Then you will be asked to complete a questionnaire and an interview, which will require you to acknowledge previous history of physical activity and barriers, this is for the researcher to gain an understanding into your current feelings towards physical activity. The questionnaire will also ask for you to offer 3 solutions you feel would help towards creating behaviour change, this will be used when the researcher plans out the 2 week intervention. Before the intervention you will be required to approve of the intervention programme. During the 2 week intervention the researcher will be attempting to be as involved in your life as possible, this is to observe your attitude towards physical activity when you are completing your exercise, you will also be asked to keep a diary during this time (similar to the one in the baseline week). Once the 2 week intervention is over, you will be asked to continue to keep a diary of your activity and the feelings towards this for up to 5 weeks, however the researcher will no longer be involved in your life as frequently, only through what would be the usual contact. Once the 5 weeks is over and you have passed on the diaries and other information that could be of assistance to the researcher, you will no longer be required to complete any work. However you will be asked to give permission for the study to be completed and give consent for the information being used to be added to the study.

What are the possible disadvantages and risks of taking part?

There are possible psychological and physical risks involved. From a psychological perspective, you will be asked to identify any key points in your life that influenced your involvement in physical activity or exercise. However at any point you do not feel comfortable or would like to suspend the study this will of course be granted instantly and can be continued at any time that feels comfortable for you.

With this being a physical study also, the risk of injury is possible, however as the researcher is also a qualified fitness instructor they will only be designing an exercise plan that would be suitable for someone in your current status. You will also be asked to approve of the programme beforehand so if there is an exercise that you feel may be detrimental then of course you will be allowed to change this. Risk assessments of the area being used will also be completed and the correct warming up and cooling down stretches will be used in the programme.

What are the possible benefits of taking part?

The benefits are to improve your current health status and overall create change in your behaviour towards physical activity/exercise & sport. If the intervention is successful in doing this, then your activity levels will increase which will lead to a better state of health

What if something goes wrong?

If you wish to complain or have any concerns about any aspect of the way you have been approached or treated during the course of this study, please contact Mrs Kirstie Simpson, Head of Department,

Sport and Community Engagement, Warrington Campus, Crab Lane, Warrington, WA2 0DB.

Email: k.simpson@chester.ac.uk, .Tel: 01925534312

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence (but not otherwise), then you may have grounds for legal action, but you may have to pay for this.

Will my taking part in the study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential so that only the three researchers carrying out the research will have access to such information.

What will happen to the results of the research study?

The results will be written up into a student dissertation and, possibly, a research paper that will be submitted to an academic peer-reviewed journal. Individuals who participate will not be identified in any subsequent report or publication.

Who is organising and funding the research?

The research is organised and conducted by a student of the Department of Sport and Community Engagement at the University of Chester.

Who may I contact for further information?

If you would like more information about the research before you decide whether or not you would be willing to take part, please contact:

Name **Jacob Edwards**

University E-mail: 1017627@chester.ac.uk

Thank you for your interest in this research.

Questionnaire (Ransdell, Dinger, Huberty & Miller (2009).

Please place a tick next to the barriers that interfere with your ability to take part in regular physical activity.

Personal Barriers

Poor health

Fear of injury

Fear of falling

Pain

Arthritis pain

Lack of knowledge about the benefits of physical activity

Being uncomfortable exercising around others

Fear of failure

Negative exercise experience

Other: _____

Environmental Barriers

Limited funds

Difficult access to exercise location

No transportation

Unsafe neighbourhood

Bad weather conditions

Other: _____

Social Barriers

Family demands

Lack of support from family or friends

Other: _____

Top Barriers

From the above barriers, please identify the main barriers that might prevent you from being active

1. _____

2. _____

3. _____

Solutions for Overcoming the Top Barriers

Please identify any strategies/exercises you would be willing to try to overcome your barriers

1. _____

2. _____

3. _____

Appendix D- Pictures from throughout the intervention

An initial struggle early on in the intervention as my father completed the walk to Cheshire Oaks unaware he put odd shoes on.



One of the walks to Nan & Grandads. The smile is real.



Final game of racquetball. The 'cool pose' needs work admittedly.



Success! The conclusion of the intervention sees a matching pair of shoes

